ABSTRACT OF A

Post-Graduate Lecture

ON

THE DIFFERENTIAL DIAGNOSIS OF ABDOMINAL DISEASES IN CHILDREN.

Delivered at the Evelina Hospital for Sick Children on March 23rd, 1898,

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AFTER referring to the wide range of the subject of the lecture, which made it difficult to compress the matter within the limits of one hour, Dr. Carpenter stated that he hoped to conveniently concentrate this by discussing and demonstrating the method to which he particularly wished to draw attention — namely, that of rectal exploration as applied chiefly to the diagnosis of abdominal and pelvic disease in children. With reference to this method Dr. Carpenter noted the insufficient recognition by the profession of the valuable information which could be gained from rectal examination, and stated that in his opinion if combined with abdominal palpation it was frequently of great assistance in elucidating cases of difficulty. He then quoted as examples the following cases.

CASE 1.—This was a case of obstinate constipation in a little girl in which after assiduous treatment by drugs rectal examination revealed a tumour growing from the anterior surface of the sacrum which later proved to be a myeloid sarcoma.

CASE 2.—A boy, aged three years, was brought to the out-patient department at the Evelina Hospital suffering from an umbilical fistula. A probe could be passed along the fistula for a short distance and careful abdominal palpation revealed a mass of mesenteric glands of about the size of a tangerine orange, with which the sinus was apparently connected. On rectal examination a mass of about the size of a small pea was felt in the position of the prostate and extending from this there existed a slight enlargement of the seminal vesicles on either side. Using the bimanual method the probe could be passed down to the pea-like enlargement where the sinus ended; passing from the fistula to the mesenteric glands was a cord of about the diameter of a lead pencil and oval in shape; the tumour also felt hard and was obviously composed of a mass of glands. No further abnormality could be detected and the case was undoubtedly one of tuberculosis of the vesiculæ seminales and prostate.

CASE 3.—The patient was a child, aged two years, suffering from whooping-cough and broncho-pneumonia. Abdominal examination revealed a tumour suggestive of tuberculous peritonitis; by the combined rectal and abdominal method a horseshoe kidney could readily be detected. This diagnosis was confirmed at the necropsy.

CASE 4.—A boy, aged seven years, a patient under the care of Mr. Lacy of Sunninghill, Ascot, suffered from an indefinite febrile complaint characterised by tumid abdomen, constipation, and ill-health. Typhoid fever was suspected. Nine weeks later, considerable improvement having meanwhile occurred, the patient's temperature suddenly rose to 104° F. and kept at about this point. A rectal examination was made and an abscess was found at the back of the rectum containing about an ounce of foul-smelling pus.

Dr. Carpenter then made reference to the tumour frequently felt *per rectum* in intussusception, which gives a sensation to the finger similar to that obtained from the os uteri in advanced pregnancy, and to the blood-staining of the finger on examination. He afterwards noticed the frequency with which rectal exploration was of service in the diagnosis of tuberculous peritonitis from chronic gastro-intestinal catarrh with loss of muscular tone; if peritonitis were not present, between one finger in the rectum and the other hand on the abdomen the thickness of the abdominal wall only would be felt, whereas if an appreciable quantity of extraneous tissue existed it would point to the existence of lymph and thickening of the peritoneum, whilst intestinal matting and glandular enlargement could in many cases be readily detected.

Dr. Carpenter next considered the pelvic organs in female children. He stated that in a child the sacrum is almost straight and consequently also the rectum, that the bladder is egg-shaped with the larger end downwards, and is almost entirely an abdominal organ, and that the uterus consists almost entirely of cervix and is readily felt by rolling it between the finger and the symphysis pubis. He then noted that if the finger be introduced for a short distance into the rectum the sharp edges of the falciform ligament can be readily recognised, forming a sickle-shaped curve surrounding the rectum and attached behind to the sacrum, and in front to the lower part of the cervix; that guided by this structure the tubes and ovaries could be readily manipulated between the examining finger and either the bony wall of the pelvis or more frequently the tips of the fingers of the other hand placed on the lower part of the abdomen, and, finally, that at this stage the uterus could be examined. As an example of the normal size of the pelvic organs Dr. Carpenter stated that in a child, aged two years and four months, the uterus is 1 in. in length and ½ in. in breadth at the fundus; the tubes are 1½ in. in length; and the ovaries ½ in. in length and ⅛ in. in diameter. He next referred to various pathological conditions which can be detected. Small cysts of the ovary cannot infrequently be felt and displacements of the ovaries and tubes into the inguinal and crural openings can be demonstrated. Tuberculous disease of the uterus, tubes, or ovaries is exceedingly rare in children, but several cases of this were quoted and many drawings were exhibited. Inflammatory diseases of the ovaries and tubes have not received much attention up to the present time. Sanger,[1] however, of Leipsic, records the case of a little girl who contracted gonorrhœa and subsequently developed all the symptoms of acute pelvic peritonitis. Marx[2] also points out that salpingo-oöphoritis sometimes complicates vulvo-vaginitis in infants, the symptoms being similar to those found in adults. He refers to 15 post-mortem examinations on cases which exhibited symptoms of this complication, and in 5 of these he found that the Fallopian tubes contained pus and had their uterine attachments sealed. He states that these uterine inflammatory conditions may become exacerbated at puberty and may cause inflammatory pelvic conditions in newly married women. In a patient under the care of Dr. Carpenter, aged twenty-two months, and suffering from congenital syphilis, a tumour could be detected in the right inguinal region of the size of a French walnut; on rectal examination the uterus was found to be normal and attached to its upper part, by a short, cord-like enlargement, was the tumour, on the posterior surface of which could be felt what appeared to be a convoluted tube. The tumour was freely moveable and on bimanual examination fluctuation could be obtained in it. The ovary of the opposite side was normal, but on the affected side it could not be found. The liver and spleen were both enlarged. Pyosalpinx or possibly tubo-ovarian cyst was diagnosed and the case was successfully operated upon. The tumour contained foul-smelling pus and was probably a suppurating ovarian cyst burrowing between the layers of the broad ligament.

The earliest ovariotomy on record was successfully performed by Roemer, the patient being one year and nine months old. Dr. Carpenter has collected from gynæcological literature 35 cases of ovariotomy performed on patients of twelve years of age and under: of these 15 were dermoids, 10 cystic tumours, 6 sarcoma, 2 carcinoma 1 malignant tumour, 1 cylindro-epithelioma, and 1 fibromyoma. Rosenstein has reported a case of carcino-sarcoma in a child aged two years and Ganghofner a case of carcinoma of the uterus in a child eight years of age. 20 cases of carcinoma of the vagina under twelve years of age are recorded; they commonly exist as multiple polypi, do not usually ulcerate, run a chronic course, and end fatally, the surrounding organs and tissues being occasionally attacked.

Dr. Carpenter then spoke at some length on the subject of tuberculous peritonitis. He grouped this disease under the following clinical headings:—

1. A matted condition of the bowel associated with

[1] Keating's Cyclopædia of Diseases of Children, vol. iii., p. 739.
[2] Gazette de Gynécologie, Nov. 15th, 1895.

tuberculous ulceration and caseous disease of the mesenteric glands and exhibiting the symptoms of the so-called tabes mesenterica.

2. A tuberculous condition characterised by the existence in the abdomen of hard and fixed masses usually lying close under the parietes and due to the luxuriant growth of miliary tubercle. This if occurring in the omentum causes it to become thickened and contracted into a band or plate stretching horizontally across the upper part of the abdomen, or at other times the result is the formation of a thick apron lying in front of the intestines and adherent to them and to the liver, spleen, and parietes. A mass may also form in Douglas's pouch and be detected on rectal examination. Again, isolated masses, usually composed of intestinal coils matted together with tuberculous deposit outside the bowel, may give rise to a somewhat puzzling physical sign—namely, a frequent variation in the size and definition of the masses. Finally, a large mass or plate may exist between the liver and diaphragm in such a position as to be clinically unrecognisable. Very exceptionally these fixed lumps may be due to caseation of the mesenteric glands alone and it may be noted as an important fact that advanced caseation, fibroid change, or calcareous degeneration may exist in a mass of glands large enough to form an abdominal tumour with either a relatively small amount of intestinal ulceration or a mere injection of the mucous membrane. Neither fever nor ascites is a marked feature in these cases, though either may occur, and this class of cases as a rule enters the wards of a hospital, not owing to the abdominal condition, but as cases of tuberculous meningitis, of lung disease, or of extreme asthenia associated with diarrhœa. Sometimes, of course, the condition is diagnosed during life, but probably more frequently the fact is first brought to light at the necropsy owing to more prominent and striking symptoms having during life engaged the attention of the observer. In a girl, aged ten years, a fixed tumour existing in the abdomen was due to the following morbid changes which were limited to the last two feet of the small intestine. Here and there in this region to within six inches of the ileo-cæcal valve there was extensive ulceration associated with caseation and matting of the neighbouring glands, the whole being bound together by dense adhesions. Some of the ulcers were of cartilaginous hardness; the rest of the abdominal cavity was free from disease. There was secondary tuberculous pulmonary implication. The limited extent of the disease in this case suggests the possibility of its having started in a mild attack of enteric fever. A general impression seems to exist that the majority of cases of this type ultimately recover, but this seems not to be the case. In many instances, in addition to the tuberculous masses, caseation of the mesenteric glands and intestinal ulceration are present; these are the worst class of cases and border on the group enumerated under Heading 1.

3. Under this heading are placed cases which come under observation suffering from ascites; this may be the only condition existing throughout the illness, though perhaps a rectal examination may reveal some slight thickening of the abdominal contents. Ascites may hide the existence of such tuberculous tumours as have been described under Heading 2, and these may only be detected after paracentesis or if the fluid becomes absorbed. Miliary tuberculosis of the peritoneum may give rise to a considerable collection of fluid or, on the other hand, to a quantity too small for detection by clinical methods. Tubercles, again, may be found in considerable numbers in the peritoneum without the existence of any inflammatory symptoms whatever. Very little fever usually exists in these cases. The temperature may be raised for a day or two to 100° or 101° F., but it usually quickly falls to normal. On the other hand, a hectic type of temperature may exist for a considerable period in cases which ultimately recover.

4. The cases which come under notice as abdominal abscesses, but which ultimately prove to be tuberculous in nature.

5. Cases exhibiting few definite physical signs beyond an enlarged and tympanitic condition of the abdomen. There may be some variety or other of diarrhœa, the stools may have a typical pea-soup appearance or may be loose and contain masses of a putty-like consistence or a larger or smaller amount of white, flaky material or even obvious particles of undigested food. Such a case may at one moment from the associated signs and symptoms be thought to be one of typhoid fever and at another to be merely one of intestinal disturbance from improper feeding. In this group of cases no gross lesions exist and a rectal exploration may prove of the utmost assistance in enabling the observer to form an opinion on the subject of peritoneal implication.

Dr. Carpenter then referred to certain conditions liable to be mistaken for tuberculous peritonitis, such as fæcal masses, malignant disease, or even tumours due to simple inflammation of the peritoneum. Masses of scybala are usually situated in the right hypochondrium and left iliac region and are due to fæcal accumulations in the region of the hepatic or sigmoid flexure. They may be recognised by their irregular shape, by the possibility of moulding them by manipulation and by their removal by enemata. With reference to simple inflammation of the peritoneum Dr. Carpenter quoted the case of a male infant, aged eleven months, who had suffered for 14 days from severe paroxysmal pains in the abdomen accompanied by nausea and vomiting; he was pale but fairly nourished. The abdomen was distended and prominent. Around the umbilicus was a well-marked local projection which was reddened, tender to the touch and considerably indurated. There was dulness in the left umbilical, hypogastric, inguinal, and lumbar regions, but no fluctuation. A fortnight later a fæcal fistula formed near the navel and soon large, loose, yellowish motions, mixed with pus, were passed through the wound. A week later he died from exhaustion. At the necropsy a large abscess cavity existed filled with yellow semi-solid fæcal material, on the removal of which a greyish wall was visible covered with flakes of shreddy lymph. Beneath this lay many coils of intestine matted together. A fistulous opening existed at the upper end of the ileum, and the mucous membrane surrounding the opening and in other parts of the bowel was quite healthy; hence probably in this case the local peritoneal abscess opened into the bowel and did not originate in an intestinal perforation. Dr. Carpenter then referred to the subject of enlarged spleen and demonstrated a number of cases. He stated that in most cases a chronic enlargement of the spleen in children indicated syphilis, rickets, a disease of unknown causation associated with changes in the blood, or tubercle. With regard to the diagnosis of tubercle both in the abdomen and in other parts of the body Dr. Carpenter stated that he had been frequently aided in doubtful cases by an ophthalmoscopic examination of the fundus oculi. He remarked that in his experience tubercles in the choroid were not, as many have thought, so rarely met with or so hopeless to discover as the proverbial needle in the haystack. On the contrary, he had found the routine and careful use of the ophthalmoscope of the greatest value in the elucidation of difficult cases. Several cases were described as illustrations of this fact, and of these the following one is particularly instructive. For six weeks a boy, aged eight years, with a family history of tubercle, had been attended for gastric disturbance. During this time his temperature had been irregular, never above 102·4° F., and at times the morning temperature was in excess of that in the evening. At this time he was dull and apathetic. The only abnormality to be detected apart from extrapuerile breath-sounds was an enlarged mesenteric gland of the size of a hazel nut to the left of and slightly above the umbilicus. On ophthalmoscopic examination of the left eye by the indirect method the optic disc was found to be normal, but when the eye was directed to the right a round fawn-coloured tubercle of the apparent diameter of a No. 1 shot could be seen close to a retinal vein, and passing across its surface was a tiny offshoot from the vein. In the case of the right eye the optic disc was again normal, but when the eye was directed down three similar fawn-coloured tubercles were noticed in the choroid. An unfavourable prognosis was consequently made and this was justified by the result, the patient dying a few days later.

Dr. Carpenter concluded his lecture by briefly describing the appearances seen in tubercle of the choroid. The tubercles are exceedingly protean in their characteristics. They present all shades of colouration, from paler whiteness to grey and yellowish-white, or from yellowish-grey to a fawn colour. Sometimes a shimmering white central spot is seen. In shape they may be circular, oval, triangular, reniform, or quadrangular. They may be clearly cut or blurred, as may also be the retinal vessels in their immediate neighbourhood. They are not necessarily situated in the neighbourhood of the optic disc, but may be detected even at the periphery of the fundus.

[After the lecture numerous drawings of the ophthalmoscopic appearances seen in tubercle of the choroid were exhibited.]

GASTRIC TETANY.

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TETANY complicating gastric dilatation is admittedly a rare disease, only some 45 cases having been recorded, yet 2 such cases have been received into the Leeds General Infirmary within a period of little over a year. Details will be given first of a case in which the gastrectasis was the result of a duodenal carcinoma, which is itself also a rare affection. Some remarks will then be made on this case in the light of such records of published cases of gastric tetany as are within my reach. Under the morbid anatomy the outlines, unfortunately very imperfect, will be given of a second case in which the dilatation was due to causes acting outside the stomach and duodenum. A few observations will then be made upon the pathogeny of this form of tetany and on the occasional association of tetany and renal disease, including albuminuria. Finally, the possible occurrence of tetany in gastric disease other than dilatation, with an illustrative case, will be referred to and some points in duodenal carcinoma will be mentioned. I am indebted to the house physician of the Leeds Infirmary, Mr. Hirst, for notes of the first case, and to Dr. Roberts, the resident medical officer, for notes and a photograph of the second case and for the post-mortem reports of both cases.

CASE 1.—A woman, aged forty-five years, was admitted into the Leeds General Infirmary on July 5th, 1898, suffering from vomiting and loss of flesh. Many years before she had suffered from anæmia and fifteen years ago she had had hæmoptysis. She had been much troubled with indigestion, but had never vomited blood. The patient was in her ordinary somewhat weakly health up to a month before her admission, when she began to suffer from a dragging pain in the region of the stomach which was worse after food. A week later severe vomiting supervened and almost everything she ate was vomited and she was therefore compelled to limit herself to a liquid diet. During the week previous to her admission she had had cramps in her legs which came on after excessive vomiting. The following note was made as to her state when she was admitted: "The patient is a spare woman, weighing 6 st. 12 lb. She shows signs of much wasting. There is no vomiting or pain at present. The temperature is 98·4° F., the pulse is 84, and the respirations are 20. The tongue is coated and the bowels are constipated. She feels very hungry. In the abdomen there is a marked prominence occupying the umbilical region obviously due to the dilated stomach. The lesser curvature is clearly visible above the umbilicus and the greater curvature 1½ in. below it. The prominence extends 2½ in. to the right of the middle line. Peristalsis can be distinctly seen, the wave passing from left to right." It was thought that a tumour could be felt over the right extremity of the dilated stomach about 2½ in. to the right of the middle line and 1½ in. below the costal margin. The urine contained a trace of albumin, but the other organs presented no evidence of disease. There was no vomiting from the evening of July 4th up to the evening of July 6th and the patient felt quite comfortable and took small quantities of solid food. On the evening of July 7th copious vomiting again appeared and persisted during the night. The next morning tetany supervened without any previous tingling in the extremities. The hands and arms were chiefly affected with the painful tonic spasm. The fingers and thumbs assumed the position described as the "obstetric hand" and the wrist and elbows were flexed. The feet were also involved and she lay propped up in bed with flexed knees. The muscles of the jaws were somewhat rigid and there was difficulty in opening the jaws at all widely, but the speech was unaffected. The patient was much exhausted, her face was dusky, her lips were blue, and her pulse was small. The temperature was 94·6°. An attempt to wash out the stomach was abandoned. I saw the patient at 2 P.M. on July 8th, when the tetany was still present though the vomiting had ceased. The stomach was emptied and thoroughly washed out with saline solution. A nutrient enema was given at once and a hot rectal saline injection ordered to be given in two hours. She improved, but only temporarily, and died a couple of hours later from exhaustion. Death was preceded by a more generalised spasm.

Necropsy.—The body was that of a much wasted woman. There was no jaundice. When the abdomen was opened the stomach was seen to be enormously dilated, the greater curvature extending down to the pelvis. No growth could be seen, but a mass of the size of a walnut was felt in the neighbourhood of the duodenum. When the stomach and duodenum were laid open the growth was seen to extend from just above the papilla downwards for 1½ in. It seemed to almost completely obstruct the lumen of the gut. Although the papilla was surrounded by growth, yet there was no obstruction to the common bile-duct, for bile could be readily expressed from the gall-bladder into the duodenum. The growth extended through the whole intestinal wall and two or three small and more recent nodules were present in the pancreas. The microscope showed the tumour to be a cuboidal-celled carcinoma containing much fibrous tissue. The stomach was dilated and its walls were thickened. The pylorus was healthy but dilated. The kidneys were small and cirrhotic and presented a typical red granular appearance. With the exception of pleural adhesions all the other organs to the naked eye appeared to be healthy.

Although the clinical examination was deficient in certain details, especially in regard to the symptoms of Trousseau, Chvostek and Erb respectively, the diagnosis in this case cannot, I think, be doubted. It has been urged that all cases of tonic spasm occurring in dilatation of the stomach are not to be called tetany. So distinguished an authority on tetany as Frankl Hochwart[1] writing in 1897 only recognises as genuine gastric tetany 11 out of some 40 cases reported up to that time. The grounds, however, on which some of the cases have been excluded are not always obvious. The advantages of distinguishing between gastric tetany and gastric dilatation with tetanoid spasm are not altogether apparent unless it can be shown that the two conditions differ in cause as well as in symptoms. It certainly seems convenient to include under the name of gastric tetany, as most writers do, at least all cases of gastric dilatation complicated with such tonic spasm in the extremities as is seen in ordinary tetany. If the classification given in Bouveret and Devic's[2] paper be accepted, the above recorded case would fall into the second group, where the spasm of the extremities is also accompanied by tonic spasm in the muscles of the face and neck or trunk. The rapidity with which death may occur in this disease is well illustrated by this case. In Marten's[3] case the single attack of tetany proved fatal in four hours. In a very few instances (Müller,[4] Kussmaul[5]) a long interval of comparative health had separated previous attacks of tetany from the fatal one. Although in the case now recorded there had been dyspeptic symptoms for many years, yet the gastric dilatation leading to the tetany had probably not existed more than a few weeks. The reason that dyspeptic symptoms have usually been noted for many years previously is because by far the most frequent cause of gastrectasis complicated by tetany is cicatrisation of an ulcer. Severe vomiting has been almost a constant precursor of gastric tetany and has been immediately preceded by tingling in the extremities. The vomiting, but not the tingling, was present in this case. Albuminuria was noted here as in several other recorded cases. There was no particular thirst. The temperature fell during the attack to 96·4°. Often a rise and not a fall of temperature has been noted; in Collier's[6] cases it reached 109° before death. The patient resembled in many respects one dying from acute abdominal disease, consciousness being maintained to the end. The embarrassment of respiration so frequently observed in gastric tetany was absent.

There are one or two facts which stand out in much prominence when the morbid anatomy of gastric dilatation fatal by tetany is considered. In by far the large majority of the cases, as mentioned above, the gastrectasis has been the result of the cicatrisation of an ulcer or very rarely, as in the cases of Bouveret and Devic,[7] Richartz,[8] and Riegel,[9] carcinoma has developed in the simple ulcer. Attention has

[1] Nothnagel's Specielle Pathologie und Therapie, Band xi., 1897.
[2] Revue de Médecine, 1892.
[3] THE LANCET, Jan. 8th, 1887, p. 74.
[4] Charité Annalen, Band xiii.
[5] Deutsches Archiv für Klinische Medicin, 1869.
[6] THE LANCET, June 6th, 1891, p. 1251.
[7] Loc. cit. [8] Thesis, 1893, quoted by Sievers.
[9] Nothnagel's Specielle Pathologie und Therapie, 1897.

been drawn by more than one writer to the comparative frequency with which a duodenal ulcer has been found in gastric tetany such as in the cases recorded by Bamberger,[10] Dujardin-Beaumetz,[11] and Renvers.[12] More frequently still the pyloric ulcer has extended into the duodenum (Neumann,[13] Loeb,[14] Müller,[15] Thiroloix and du Pasquin [16]). There seems to be no explanation forthcoming of why, considering their infrequency, these duodenal ulcers should lead relatively often to gastric tetany. In another group of cases the cause leading to obstruction of the duodenum has operated from without. A very remarkable case was recorded by Blazicek [17] in which the gastric dilatation was due to the pressure upon the duodenum of a thickened and calculus-containing gall-bladder. In one of Müller's [18] cases there was an hour-glass contraction of the stomach due to past gastric ulceration with an axial rotation which had led to closure of the duodenum. In Berlizheimer's [19] case a pancreatic cyst had pressed on the duodenum. I may now refer to another case of gastric tetany in the Leeds General Infirmary, under the care of Dr. Barrs, who has kindly allowed me to make use of it.

CASE 2.—A woman, aged sixty years, was admitted into the infirmary on July 3rd, 1897, with gastric symptoms. The outlines of the greatly dilated stomach were distinctly visible through the abdominal walls and there was incessant vomiting. On the evening of July 4th she developed tetany, the hands and arms assuming the characteristic position of that disease. There was much pain in the arms and legs. She died in a few hours and consciousness was preserved until the end. The temperature rose to 100·4° F. before death.

Necropsy.—The body was considerably emaciated. When the abdomen was opened the stomach was seen to be greatly dilated and reaching far below the umbilicus. The stomach being laid open, the upper part of the duodenum was seen also to be dilated, but there was no trace of cicatrised ulcer or other lesion. There was a mass of new growth occupying the middle of the body of the pancreas, but the head was quite free from disease. There was also a small mass of growth (primary carcinoma) in connexion with one ovary. There was no peritonitis. The kidneys were distinctly diseased. The right kidney was small and weighed only 3¼ oz., whereas the left kidney was enlarged and weighed 6¼ oz. Both presented undoubted evidence of cirrhosis. I may add that I have recently carefully examined the stomach and duodenum, including the head of the pancreas, and I could find no lesion which would account for the gastric dilatation. There was some evidence of past adhesion about the duodenum.

This case is interesting from two points of view—namely, (1) the entire absence of any disease of the stomach itself or duodenum to account for the gastric dilatation and (2) the presence of renal disease. The dilatation could not have been due to the malignant disease of the pancreas, for the head of this organ was quite healthy. I am inclined to think that it was caused by an anchoring of the pylorus or duodenum through adhesions. In the case reported by Holman [20] the stomach was much dilated, but there was also no sign of ulceration past or present. In de Beaurmann's case quoted by Fenwick [21] the dilatation is said to have been atonic. Singer [22] in the Vienna Medical Club stated that dilatation of the stomach is not always present in cases of gastric tetany, but often only an atony; no cases are given in support of this view. In Merlin's [23] case quoted by Sievers there were dilatation of the stomach and hæmorrhages and erosions in the mucous membrane of the stomach and duodenum.

It has been very properly suggested that any satisfactory explanation of the etiology of gastric tetany must take cognisance of the frequent occurrence of ulcers wholly or partially cicatrised. Bouveret and Devic [24] thought they had discovered the connecting link in the hyperchlorhydria frequently associated with gastric ulcer. Excess of hydrochloric acid has certainly also been found in gastric tetany by Gumprecht [25] and Thiroloix and Du Pasquin.[26] The occurrence of tetany in gastric carcinoma developing in an old gastric ulcer would not militate against this view because hyperchlorhydria has been known to occur in this small subgroup of gastric carcinomata. On the other hand, there are cases of gastric tetany on record in which free hydrochloric acid has been absent from the gastric contents, as in Blazicek's [27] case. In addition, there are cases referred to above in which pressure from without and other conditions presumably unassociated with gastric hypersecretion have led to dilatation of the stomach and tetany. Thus, if Bouveret and Devic's [28] views are correct as regards some cases they certainly are not so for all.

Of the three or more theories put forward to explain the origin of gastric tetany the auto-intoxication theory has very rightly found the widest acceptance. Neither the loss of fluid to the body, first put forward by Kussmaul but afterwards disclaimed by him, nor yet the reflex theory supported by G. Sée, Müller,[29] Berlizheimer,[30] and others, offers a satisfactory explanation. Fleiner, quoted by Max Einhorn,[31] has warmly supported the first-named theory, but Blazicek [32] showed by actual investigation that in his case, at all events, there was no increased loss of water to the blood. Jürgensen,[33] however, in commenting quite recently upon a case of cerebral symptoms with clonic convulsions occurring in gastric dilatation also leans to this view. Another very strong reason against it is the fact that there are not a few pathological conditions in which either adequate fluids are not supplied to the body or excess of fluids are drained away from it without producing tetany.

With increasing knowledge the application of the reflex theory to the actual causation of disease has gradually been narrowed down within very modest limits. It is true that gastric tetany has followed almost immediately on passing a stomach tube (Fenwick,[34] Collier,[35] and others), or on percussion or even stroking the abdomen (Müller [36] and Gerhardt [37]), yet, as Loeb [38] and others have pointed out, it would be equally reasonable to attribute ordinary tetanus to reflex causes, since such peripheral irritation will suffice here also to bring on the paroxysm of spasm. The presence of entozoa in the intestine in cases of tetany such as the one described by Riegel [39] and others and the disappearance of the disease with the evacuation of the parasite have been looked upon by some as being evidence in favour of this reflex view. Yet it is not impossible that these parasites themselves lead to the development of poisons, a view lately discussed by Peiper.[40] If the auto-intoxication theory be accepted it is an easy matter to believe that the same convulsive poison which produces the tetanoid spasm also heightens the excitability of the nervous centres, so that a slight peripheral irritation may suffice to call forth the spasm. In support of the intoxication theory Bouveret and Devic [41] have separated from the stomach contents of a patient with permanent hyperchlorhydria a poison soluble in alcohol which produced convulsions in animals. They thought that this poison arising in the stagnate and hyperacid gastric contents in dilatation of the stomach would explain this form of tetany. On the other hand, cases have been examined with negative results by very reliable observers, such, for instance, as a case by von Jaksch and Berlizheimer,[42] one by Blazicek [43] assisted by Landsteiner, and also Müller's [44] cases. Fleiner, quoted by Gumprecht,[45] obtained positive results in his case only after a certain chemical treatment of the gastric contents. Gumprecht's elaborate investigation also gave a somewhat uncertain result. The alcoholic precipitate containing albumoses and salts possessed marked toxic properties, but the albumoses had not been absorbed, since there were none present in the urine. This

[10] Virchow Hirsch Jahresbericht, 1892.
[11] L'Union Médicale, 1884.
[12] Berliner Klinische Wochenschrift, 1888.
[13] Deutsche Klinik, 1869.
[14] Deutsches Archiv für Klinische Medicin, 1890.
[15] Loc. cit.
[16] Bulletin de la Société Anatomique, 5me série, vii.
[17] Wiener Klinische Wochenschrift, 1894.
[18] Loc. cit.
[19] Berliner Klinische Wochenschrift, 1897.
[20] THE LANCET, Oct. 20th, 1894, p. 915.
[21] Transactions of the Clinical Society of London, vol. xxxviii., 1895.
[22] Neurologisches Centralblatt, 1894.
[23] La Loire Médicale, 1890.
[24] Loc. cit.
[25] Centralblatt für Innere Medicin, 1897.
[26] Loc. cit.
[27] Loc. cit.
[28] Loc. cit.
[29] Loc. cit.
[30] Loc. cit.
[31] Twentieth Century Practice.
[32] Loc. cit.
[33] Deutsches Archiv für Klinische Medicin, 1898.
[34] Practitioner, 1892.
[35] Loc. cit.
[36] Loc. cit.
[37] Berliner Klinische Wochenschrift, 1888.
[38] Loc. cit.
[39] Deutsches Archiv für Klinische Medicin, 1873.
[40] Deutsche Medicinische Wochenschrift, 1898.
[41] Loc. cit.
[42] Loc. cit.
[43] Loc. cit.
[44] Loc. cit.
[45] Loc. cit.

observer concludes that in his case the presence in the body of any special poison at the time of the tetany, such as might be looked upon as the basis of an auto-intoxication, could not be proved by the ordinary methods. If a poison is manufactured in the abnormal chemical processes in the dilated stomach its absorption should lead to a greater urotoxic coefficient and also it should be possible to separate this poison from the urine. Gumprecht found a higher urotoxic coefficient in his case, but it was present both in the interval as well as during the attack, and Jacobson and Ewald [46] obtained from the urine of their case a ptomaine-like body. There have been other investigations in tetany, notably by Albu, to which I have not referred, as my object is merely to roughly indicate the present position of the subject. Unfortunately no investigations of any kind were made in my cases. However, plausible and probable the auto-intoxication theory is, it cannot as yet be looked upon as having been definitely established by experiment.

There is, however, another point of considerable interest also connected with the intoxication theory in the relation of gastric tetany to renal disease including albuminuria. In not a few cases of gastric tetany (Loeb,[47] Merlin,[48] Dreyfuss Brisac,[49] Blazicek,[50] Galliard,[51] Fenwick,[52] Sievers[53]), albuminuria has been noted. In some of these cases the kidneys have been found healthy after death, at least so far as the naked-eye appearances were concerned. Poisons excreted by the kidneys, whether in the infections or the intoxications, may, and frequently do, injure the kidney in their passage through it. I have not met with any particular researches into this subject in tetany, gastric or other. In one of Hoffmann's [54] cases of tetany (No. 6) it is stated that there was an acute nephritis, but no exact details are given. The relation of tetany to chronic nephritis is perhaps of greater importance. In one of Blazicek's cases and in both of mine there was more or less advanced renal disease. Wick [55] has related a case of tetany, not of gastric origin, in a patient who was the subject of granular kidney, but, as Frankl Hochwart [56] points out, there are so many factors present in this case that it is difficult to interpret it. In No. 7 of Hoffmann's [57] cases, in a lad aged nineteen years, there was also chronic nephritis, but in the reading through the details of the case the question arises whether it might not be a mere matter of coincidence. It has not been proved that the poison or poisons causing uræmia can set up the spasm of tetany nor clinically is there any reason to suspect such a possibility. There is, however, another aspect of the relationship of tetany and renal disease. If tetany is due to a poison excreted by the kidneys then anything which would render the kidneys less efficient excretory organs should precipitate the attack of tetany. It may be, as Bouveret [58] says, that a sudden augmentation of the poison or a temporary insufficiency in the elimination may determine the attack, but this view as yet quite lacks the necessary proof. Before leaving the kidneys it may be mentioned that acetone, to which, indeed, Biscaldi [59] attributed the tetany in his case, and also sugar (Fenwick [60] and others) have been found in the urine. Frankl Hochwart [61] has specially drawn attention to the question of season and tetany, and Gumprecht [62] says that 75 per cent. of the cases of gastric tetany occur from January to March, the months in which ordinary tetany is most common. The figures as regards gastric tetany are certainly too small to base any conclusions upon. Both my cases occurred in July. Of Sievers's [63] cases recently published one occurred in April and the other in November, and of the other two cases referred to in his paper Holstoi's was noted in February and Bockman's in April. The greatest frequency of tetany at a given time of the year, epidemic outbreaks of the disease, its occurrence as a complication of infective illnesses, the frequent rise of temperature noted and other facts, have been appealed to in support of an infective origin.

A question of some importance arises as to whether tetany may occur in connexion with gastric disease other than dilatation. Max Einhorn [64] and some other writers accept this view. Schlesinger [65] in the Vienna Medical Club reported a case in a woman, aged thirty-five years, which occurred in connexion with an acute gastro-enteritis caused by eating contaminated sausage. The same writer drew attention to an almost unknown form of tetany which he described as chronic benign tetany of gastric origin. Perhaps the following case, which Dr. Barrs has very kindly placed at my disposal, falls into this category.

CASE 3.—A girl, aged seventeen years, a patient under the care of Dr. Cheetham of Guiseley, complained of cramps in the hands and feet. When she was seen by Dr. Barrs the hands presented the typical position found in tetany. The tonic spasm also affected the legs. It was stated that the face was involved at times. The attacks came on chiefly in the afternoon and lasted until night and were preceded by vomiting. The patient was a delicate girl and diarrhœa and vomiting were very readily induced. There was no evidence of gastric dilatation. The girl's parents stated that the attacks had recurred on and off for six years, but that during the last two years there had been no recurrence. They were certain about the relation of the spasm to the vomiting; indeed, they attributed the spasm to the vomiting. Beyond being worse in cold weather the parents could give no information about the relation of the attacks of tetany to any particular months in the year. The patient is now perfectly well.

The chief interest in this case is the systematic occurrence of the attacks of tetany after severe vomiting. It is this fact, together with the long period of time over which the attacks were observed, which separates the case from ordinary tetany. Of course, gastro-intestinal symptoms are not uncommon in tetany of children, but the regular association of the vomiting and tetany is, I take it, a different matter. I may mention here that tetany is decidedly an uncommon disease in Leeds and its neighbourhood.

The diagnosis of gastric tetany is mostly quite easy. Fenwick,[66] however, tells of a case in which apparently there was some chance of mistaking the disease for uræmia and in my first case the idea of uræmia presented itself but was easily set aside. If the term "gastric tetany" is allowed to include the milder as well as the severer cases, and there is no sufficient reason against this view, then the disease may turn out to be more common than is usually supposed. The transition between gastric tetany strictly so-called, tetany with gastro-intestinal symptoms, and ordinary tetany would seem to be a gradual one. The prognosis of tetany occurring in gastric dilatation is undoubtedly very serious; nearly 75 per cent. of the cases die. The largest mortality occurs in the groups 2 and 3 referred to above, that is, where the spasm in the extremities is associated with tonic spasm in the head and trunk muscles or with clonic spasm. If the very strict views are held as to the disease then the outlook is almost hopeless; thus of the 11 cases recognised by Frankl Hochwart only 1 recovered. There is a danger here, as in some other diseases, that the fatal issue is raised to be the chief criterion as to the nature of the affection.

After what has been said under the prognosis it may be thought that little need be added about the treatment of gastric tetany, yet in some cases, and notably one by Blazicek, [67] the fatal issue was warded off for a time by systematically washing out the stomach. On the other hand, as mentioned above, the tetany itself has been ascribed to the stomach-tube, and undoubtedly the paroxysm has sometimes followed almost immediately upon its use. Some time ago this fact so impressed itself upon some observers, such as Fenwick, [68] that the opinion was expressed against washing out the stomach in this disease. Most writers, however, including Fenwick, now agree that this method of treatment should be adopted. With the soft tube now in general use the risk of provoking an attack should be reduced to a minimum. Before the stomach is emptied it is perhaps well to supply fluid to the body in the form of saline injections into the rectum or subcutaneous infusion. In my case the stomach was thoroughly washed out, sterilised saline solution being used for the purpose as soon as the wash-water became clear. In some quarters it has been strongly stated, perhaps rather from theoretical considerations, that alcohol should be avoided in gastric

[46] Verhandlungen des Congress für Innere Medicin, 1893.
[47] Loc. cit. [48] La Loire Médicale, 1890.
[49] Gazette Hebdomadaire, 1885. [50] Loc. cit.
[51] Gazette des Hôpitaux, 1883.
[52] Transactions of the Clinical Society of London, 1895, vol. xxxviii.
[53] Berliner Klinische Wochenschrift, 1898.
[54] Deutsches Archiv für Klinische Medicin, 1888.
[55] Wiener Medicinische Wochenschrift, 1894.
[56] Loc. cit. [57] Loc. cit.
[58] Maladies de l'Estomac, 1893.
[59] Revue des Sciences Médicales, tome xli.
[60] Loc. cit. [61] Loc. cit.
[62] Loc. cit. [63] Loc. cit.
[64] Loc. cit.
[65] Neurologisches Centralblatt, 1894.
[66] Loc. cit. [67] Loc. cit. [68] Practitioner, 1892.

dilatation. Other authorities have, perhaps, more correctly stated it when they say that alcohol should be avoided if it is found in the stomach some time after it has been taken. Penzoldt[69] says that the treatment should aim chiefly at avoiding the occurrence of this fatal disease. He draws attention to the fact that Boas recommends diuresis. Rectal injections of milk are also mentioned by Penzoldt, otherwise the treatment is symptomatic. If the tetany ceases and the general condition of the patient permits of it an attempt should, perhaps, be made to do away with the gastric retention by pyloroplasty, gastro-enterostomy, or pylorectomy. A pylorectomy was performed in Gumprecht's case some time after the last attack of tetany, but unfortunately the patient after doing well for a few days died from peritonitis.

In conclusion, I will make a few remarks on duodenal carcinoma. Its rarity is obvious from the statistics given by Ewald.[70] Thus, among 1184 cases of intestinal carcinoma, in only 17 cases did the new growth occupy the duodenum. The proportion of duodenal to intestinal carcinoma was thus 1 in from 60 to 70. This accords fairly well with Schlesinger's[71] figures (1 in 60) taken from the post-mortem reports in Vienna. Pic[72] has made a very elaborate study of duodenal carcinomata and he divides them into three groups according to their situation. When placed above the common papilla they are indistinguishable from carcinoma of the pylorus. When situated below the papilla there is a permanent reflux of bile and pancreatic juice, and when round about the papilla they produce mixed symptoms. My case could not be distinguished during life from carcinoma of the pylorus; it has been pointed out that bile may regurgitate through a rigid pylorus. The growth surrounded the duodenum and produced marked stenosis with dilatation of the upper duodenum and stomach. The papilla lay in the middle of the growth but the common bile-duct was not obstructed and there was no jaundice. In Schlesinger's case, in a woman, aged fifty-eight years, the growth was of the size of a gulden piece and extended up as far as the papilla. There was no stenosis of the duodenum and therefore no dilatation of the stomach. There was no vomiting until the last few weeks. Jaundice was present and became intense towards the close. Secondary nodules were present in the liver. In the case reported by Mauclaire and Durrieux[73] the non-ulcerated growth extended for three-quarters of its length round the lumen of the gut and the papilla was placed in the middle of it. There were much pain in the epigastrium and vomiting, but no jaundice. The growth had produced more acute symptoms of obstruction, but as yet no dilatation of the upper duodenum or stomach.

Leeds.

A CASE OF TETANUS TREATED WITH TETANUS SERUM; RECOVERY.

BY DAVID SIME, M.D. GLASG.

ON July 2nd, 1897, a strong, healthy youth, aged seventeen years, had a fall from his bicycle and cut his right hand whilst turning sharply from a country road into a farmyard. The wound, which was on the hypothenar prominence of the hand, was about three-quarters of an inch in extent and it was found to be not merely bleeding but grimed with dirt. In consequence of this latter fact, rather than of the bleeding, the patient, with the companion who was with him, repaired to the village pump and sensibly scrubbed the wound thoroughly "for a good half hour." So little injury otherwise was incurred that he was able to return home on his bicycle, a distance of at least eight miles. Thereafter, apparently, the wound healed satisfactorily and on returning to town, which he did in a few days, he at once resumed his business duties, looking so vigorous and well that his friends congratulated him on the fact. On July 12th, however—i.e., on the eleventh day after the accident, the latter by this time having been practically forgotten—he felt an unaccountable heaviness about the lower jaws and a slight difficulty in mastication and swallowing. These were the first indications of anything like a toxic result of the injury. The incubation period, therefore, of this particular case was not less than 10 days. Next morning the heaviness of the jaw and the difficulty of mastication were slightly increased, but these symptoms were in no way referred to the accident either by the patient or his relatives. Nevertheless, they were so persistent that on the same day he took advice on the matter in the city and having been reassured by the medical man as to their transient character he ignored them as well as he could. This, however, was found to be impossible, so much so that on returning home he called upon me on the way, this being the first time I had seen him. I then found that he could only open his mouth about half its normal extent. There was no other muscular difficulty unless a slight thickness of speech and uneasiness in swallowing. He could rise from his chair, stand, and walk about without difficulty, and the hand grasp was normal and even strong, and equally so on both sides. The wound in the hand was quite healed, with a tolerably dense fibrous cicatrix, and there was still some black "dirt" ingrained in the scar, but pinching of the latter gave no pain and there was no inflammation whatever either here or in any part of the arm. Next day, July 14th—i.e., the third morning after the first symptoms had set in—he still courageously went to his office, but he was unable to stay for more than two hours; a certain stiffness in the loins and back had set in and he found difficulty in sitting on his office stool for more than a few minutes at a time. He was sent home by the heads of the firm. On his way home he again called upon me and I now found that in addition to the difficulty of opening his mouth, which had increased, there was a slight rigidity of the muscles of the back and of the right hand and arm, the hand grip being less pronounced than that of the left side, which was in no way impaired. He rose from a chair with difficulty and his walk was somewhat stiff and unsteady; he was also restless and nervous and had an anxious, scared look, which was altogether foreign to him. On the 15th—i.e., on the fourth day of the disease—he remained at home and, after a hot bath, for the most part in bed; but although not in any way materially worse he was yet in no way really improved, the muscles of the jaw and neck being constantly more or less rigid, with a tremor occasionally running through the rigidity, and the muscles of the right arm and back were still disagreeably stiff. Nevertheless, he could yet masticate, although with increased difficulty, and his appetite was excellent. Early in the morning of the 16th—i.e., on the fifth day of the illness, I was hastily summoned and found him in a deplorable condition. He was lying in bed, rigid, arched, and trembling, with great drops of sweat rolling down his face. It was quite impossible for him to open his mouth and within the last two hours he had for the first time repeatedly bitten through his tongue, which was still bleeding slightly. The expression of combined agony and despair in his face was now pitiful, all the more so that he was bearing his appalling sufferings so stoically. The centre of disturbance seemed located mainly, if not exclusively, in the upper tracts of the spinal substance. Twitching of the facial muscles, with the characteristic facies sardonica, was marked, whilst rigidity of the neck and of the right arm and hand was hardly less pronounced. The muscles of the lower back and loins and of the lower extremities, on the other hand, although occasionally rigid, were at this time not anything like so much so or so excruciatingly painful as those of the upper levels of the body. The slightest irritation in the region of the right shoulder-blade immediately induced a spasm.

It was obvious, then, that complete "intoxication" of the spinal substance with the virus and in its highest and most important tracts had at last taken place. But in this connexion it is not without interest to note that it took actually four days after the disease had set in before this result was fairly accomplished. In other words, manifestly enough, for four days after the incubation was over virus was still being steadily eliminated into the circulation by the micro-organism in the peripheral scar. On the whole this, the fifth day, was, perhaps, the worst and most excruciating of the entire illness. In spite of bromides and morphia and other sedatives, and in very large doses, the spasms continued with decreasing intervals of rest, the chief source of distress being the spasm of the lower jaw and the biting of the tongue which it occasioned. By night he had calmed down somewhat, but he slept not at all, and the paroxysms recurred at

[69] Handbuch der Speciellen Therapie, Band iv., 1896.
[70] Twentieth Century Practice.
[71] Wiener Klinische Wochenschrift, 1898.
[72] Revue de Médecine, 1895.
[73] Bulletin de la Société d'Anatomie, 1898, No. 7.

less and less intervals as the night advanced, the spinal site of disturbance being still centred mainly in the upper tracts. It was now necessary for him to be tended night and day without cessation and fortunately his parents proved as intelligent attendants as they were anxious and devoted. On the sixth and seventh days of the illness he was no better, the paroxysms, on the contrary, increasing in frequency and severity; and, both by night and day he but dozed occasionally, invariably awakening with a violent start and a paroxysm of spasm. The latter was still mainly centred in the upper tracts, but was now steadily implicating the loins and lower limbs, the lumbar not less than the bulbar swelling becoming gradually involved. The twitching of the face with the facies sardonica by this time had all but disappeared; but the clenching of the jaws with the crushing of the tongue was more frequent than before. He now only could take liquid nourishment, but of this he took plenty, his appetite remaining excellent; his pulse, too, was strong and regular; the temperature was normal and he passed urine freely and without difficulty. The bowels were cleared out by an injection of soapy water.

On July 19th, the eighth day of the illness, as there was no sign of improvement, but quite the reverse, Dr. Pye-Smith was summoned for consultation. After a careful examination of the patient he was able to completely eliminate any possibility of a surgical injury to the spine, possibly arising from the bicycle accident, and the diagnosis of tetanus was established. Most formidable as the case was, and in spite of the appalling mortality of tetanus, the prognosis determined on was not altogether without hope, partly on account of the vigorous youth and the continued strength of the patient; partly on account of the soundness of his nervous system as a whole; but mainly on account of the considerable length of the incubation period—ten days—and the already considerable duration of the disease itself—eight days—death not unfrequently occurring on the sixth or even the fifth day. As the patient had slept so little a change was advised in the sedative, and consequently a mixture of tinctura opii and of tinctura cannabis indicæ was prescribed, 15 minims of each drug in every dose, and a dose to be given every four hours, or oftener, according to the severity of the malady. The case, too, was deemed a favourable one for trying the tetanus serum treatment. At bedtime the patient had the first draught of the opium and Indian hemp mixture and thereafter he had four hours' sleep, the longest he had had since the disease was fully established. It must not be forgotten, however, that he was at the time well under the influence of the bromides, &c., for the mixture never again had exactly the same delightful effect. Although he slumbered for four hours the paroxysms never really ceased, the grinding of the teeth, the biting of the tongue, and the arching of the spine, with muffled moans, recurring with the same mournful periodicity. On the morning of July 20th—i.e., the ninth day of the illness—the serum arrived, and at about 9 A.M. (after clearing out the bowels with an injection and giving an extra large dose of the opium and Indian hemp mixture) I inoculated in the right hypogastric region—the Pasteurian site for hydrophobia—10 c.c. of the liquid. Every precaution was taken to ensure that the hypodermic needle was sterilised, the instrument (which was a new one) being taken to pieces, and the pieces boiled together for five minutes, and the skin of the abdominal wall being well sponged with a disinfectant lotion. No uneasiness whatever was caused by the inoculation, and the slight subcutaneous swelling which was occasioned by it in the course of the day gradually disappeared. The paroxysms of spasm, however, were in no way reduced either in severity or in frequency, and the centre of disturbance was in addition becoming stronger every hour in the lower levels of the spine, the entire spinal substance being now apparently involved. So severe and widespread and so frequent were the spasms that the Indian hemp and opium mixture was administered every two hours. Nevertheless towards evening I noticed that, although the spasm of the loins and abdominal walls and of the lower limbs was increasing, the facies sardonica was obliterated. The spasms of the jaw were less pronounced and the patient could open his mouth somewhat better than he had done for some days. Impressed with this fact I determined to give him another subcutaneous injection of the tetanus serum; and this I did about 10 P.M., using the same precautions as before, in the left hypogastric region. On this occasion, in spite of an increased dose of the Indian hemp and opium mixture, he by no means slept so well, but although the paroxysms continued unabated, steadily becoming more pronounced in the loins and lower extremities, he slumbered uneasily for two hours. The limbs and lower spine were supported by pillows, which gave him some comfort. Although not any better, but emphatically worse in the lower levels of the body, before leaving I noticed that the spasm of the jaws was distinctly less frequent and, moreover, that he did not bite his tongue so frequently. Next morning (the tenth day of the illness) I learnt that he had passed a very bad night but that he had not bitten his tongue for four hours. The spasms were apparently becoming stronger in the lower and slightly weaker in the higher levels of the body, and his spine was in a condition of more or less constant arch. The spasms in the loins and lower limbs became in the course of the morning so excruciating that Dr. Pye-Smith was again summoned. By the time he arrived there was no indication of the subcutaneous injections in the hypogastric sites, but a slight erythematous eruption had developed itself over the thighs and abdominal walls. This was at least proof that the serum was having some constitutional effect, which was still further evidenced by the fact that by 10 P.M. the temperature, which hitherto had been practically normal, rose to 101° F. A continuation of the opium and Indian hemp sedative was advised, as, if it did not reduce the severity or frequency of the spasms, it unquestionably induced a certain amount of sleep; if it did not soothe the spinal irritation it at least calmed the brain well. Another subcutaneous injection of the tetanus serum was also recommended, providing the spasms did not soon materially abate. As, however, the erythematous eruption had very considerably increased over the body by the next day, the 22nd, or the eleventh day of the illness, the parents demurred about the further use of the serum unless it should prove absolutely essential. By this time the biting of the tongue had completely ceased and the maximum of spinal disturbance was steadily shifting down the cord, by much the worst of the spasms being now in the small of the back and in the thighs. If the biting of the tongue or the spasmodic distress of the jaws and neck should at all recur, much less increase, if, in other words, there should at any time be any indication whatever, however slight, of a fresh "intoxication" of the upper levels of the spinal substance or of any level higher than the lumbar swelling, it was my intention to repeat without delay the inoculation of tetanus serum, and this the parents very sensibly agreed to and fully empowered me to do. After the tenth day of the illness, however, any indication of a fresh implication of the superior tracts of the cord, with biting of the tongue, &c., never again recurred, so the necessity for repeating the serum inoculation did not arise. That it was still acting constitutionally was obvious, for the erythematous eruption spread over the entire body in a bright lobster-red scarlatinoid rash, the temperature rising to a little over 102°, but this temperature was not maintained for more than two nights, and in the course of a week the eruption disappeared in scales and the temperature became strictly normal. All this time, however, the severity of the spasms in the back and legs continued unabated, and if there was no indication of any increase or spreading of the affection upwards to its original site, there was no proof whatever of the character or severity of the spasms, such as they were, being diminished. Furthermore, the Indian hemp and opium sedative had by this time to be materially increased in order to induce any sleep at all, and even when induced the paroxysms of spasm seemed but slightly influenced thereby. These facts, taken in connexion with the ominous contraction of the pupils, which was now revealing itself, induced me to try chloral hydrate. On the 24th, or the thirteenth day of the illness, I accordingly gave, at 10.30 P.M., a draught composed of 20 grains of chloral hydrate and 30 grains of bromide of potassium and waited for a couple of hours to watch the result. Very little effect was produced; I therefore repeated the dose, and the spasms soon became distinctly less severe and the patient fell into a long but troubled sleep. All night long he was delirious and at 3 A.M. I was summoned. The delirium, however, was clearly due to the chloral hydrate, and to this alone, for hitherto, and in the worst of his agonies, the patient's mind had been marvellously undisturbed. By this time I noticed that the spasms, even of the loins, were distinctly less pronounced, and that in his restless sleep he moved about with more freedom than he had yet done

since the fifth day of his illness, or when the complete intoxication of the spinal substance had occurred. Next day, the fourteenth of the illness, he seemed decidedly better, the paroxysms of spasm being much less pronounced, and, on the whole, he passed a fairly quiet day, much calmer than he had yet enjoyed. At night the Indian hemp sedative with 20 grains of chloral hydrate were administered and he passed one of the best nights he had yet had. I wrote to Dr. Pye-Smith at this stage as to the best sedative now to administer and he strongly recommended the continuation of the chloral hydrate, with, in addition, a glass of stout every night. From this time the progress towards recovery was rapid and extremely satisfactory, the paroxysms became distinctly less severe and less enduring; for the most part they were mainly confined to the legs and occurred chiefly in the evening before his night draught and when he was most exhausted. His appetite increased, he was now taking regularly a mixture of peruvian bark and dilute phosphoric acid and he could masticate food fairly well. On the 29th, the eighteenth day of the illness, the bowels for the first time moved spontaneously. On July 31st and August 1st, the twentieth and twenty-first days of the illness, he had the very last flickering indications of anything like spasm. He now only had the sedative mixture at bed-time and when he could not otherwise go to sleep, and he slept for hours without the slightest sign of spasm. On August 2nd he twice got up for an hour and his movements were good and, although very weak, perfectly normal. He now could bring his arms around his head and both sit with ease on a chair and rise from it with the same freedom. By the 7th he was so decidedly improved that his father and mother were able to take him to the seaside. On the 10th I received a letter from his father in which he said that his son "stood the journey well and is already showing great benefit from the change; he is gaining strength daily."

What influence had the tetanus serum on this case? It can hardly, I think, he said that it was "antitoxic," or, in other words, that it destroyed or aborted the "virus" which had been eliminated into the circulation, for the frequency and the severity of the paroxysms of spasm were in no way reduced by it. The amount of virus which had been thrown into the spinal system by the fifth day of the illness remained for at least a week after the subcutaneous inoculations of serum and in spite of these apparently the same. The amount, however, did not increase. Now, before the fifth and sixth days, it is certain that there was a continuous elimination of virus into the spinal substance, with fresh points of intoxication every few hours. Did this process cease on the sixth day? If it did not cease is it possible that the serum, although in no way antitoxic or antidotal, nevertheless prevented any further elimination of the virus by acting on the specific micro-organism which elaborated it and therefore prevented any fresh intoxication of the higher levels of the cord? If this were so it was a very great result and rendered ultimate recovery but a question of time and strength. With another such case I should employ the treatment at the earliest possible opportunity, for if the serum be in reality a germicidal agent even more than an "antitoxin"—which from this case alone there is reason to show—the sooner it is used the better. There is no reason why it might not be used for every suspicious wound and not merely as a preventative inoculation, but even as a lotion itself. One fact is certain from the case before us—that it does no harm, however much good. Again, it is of interest to note that the wound in this case was received in the country and at a farmyard. How often does this occur? Tetanus is a disease of the country much more than of the town, there being good reason to show that an old garden, a badly-drained stable, or a badly-drained farmyard is the peculiar haunt or "home" of the tetanus bacillus. If this be so a wound such as that incurred in this case must be of pre-eminent danger and should receive the promptest and the most effective of preventive treatment.

Harringay, N.

FATAL POISONING BY MUSHROOMS.—An inquest has been held at Llandaff, Glamorganshire, on a man, aged forty-four years, who died after eating mushrooms which he had gathered. The widow stated that she and the children had taken them without any ill-effects. After hearing the medical evidence the jury returned a verdict of "Death from poisoning through eating mushrooms."

CASE OF TETANY WITH DILATATION OF THE STOMACH; DEATH.

BY JOHN SOUTTAR McKENDRICK, M.B., C.M. GLASG.,
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WHILE acting as resident physician in the wards of Sir William Gairdner I had an opportunity of observing that somewhat unusual nervous disorder, tetany in the adult. As I have noticed that a few cases have already been recorded of tetany resulting from gastric dilatation I take the liberty of publishing this case, which, if nothing more, may interest those who are collecting statistics on this subject. Almost 50 years ago Steinheim in Germany and Dance in France described this disease, but it was not until Trousseau in his masterly way wrote on the subject that the disease became much known. Trousseau called it "tetanilla"; for the name "tetany" we are indebted to Corvisart, who described the condition in 1852. Cases have been reported by Moxon, Wilks, and Abercrombie, and by Riegel, Erb, Weiss, and others, and the disease has been fully discussed in lectures by them. The description of the complaint is fully given in Gowers's and Ross's text-books on diseases of the nervous system. Moxon described the close similarity between tetany and certain symptoms developed from poisoning by ergot, although he noted that in the latter the symptoms passed on to tetanus. Foord has also mentioned a case of hysterical spasm which closely simulated this disease, while Cheadle[1] instances cases where patients who in childhood had convulsions in adult life suffered from tetany. He also notices the similarity of the disease in adult life and in childhood. Tetany is considered by some to be of a rheumatic nature as it so frequently occurs from exposure to cold, while the joints are painful and often swollen from œdema. Trousseau has described it as the "rheumatic contracture occurring in nurses," and a case is reported by Cheadle of a girl, aged seventeen years, who had tetany, and who, when she was twelve years of age, was the victim of chorea, a disease closely related to rheumatism. Amongst numerous other causes assigned to this obscure complaint may be mentioned anæmia, intestinal disorders, and dilatation of the stomach, while it has also been observed during lactation and in pregnancy. The etiology of tetany is fully discussed by Stewart of Canada,[2] who classifies various types of the disorder as follows: (*a*) when it is epidemic and acute; (*b*) when it is chronic from debilitating diseases; and (*c*) when it is the result of thyroidectomy. He points out that recovery is frequent and that the malady has a low death-rate. He notes, however, that out of 78 thyroidectomies 13 had tetany, of whom 6 died; and he also mentions the fatal tendency in cases where dilatation of the stomach is a complication or possibly a factor in the causation of the disease. Cases of tetany with gastric dilatation have been described by Kussmaul, Gerhardt, Dujardin-Beaumetz, and Müller, the latter noting the mortality in the few cases he had met with as 66 per cent. It will be my object to describe this case as fully as possible and afterwards to discuss it shortly.

A man, aged twenty-six years, was admitted into the Western Infirmary on June 14th, 1897, complaining of cramps of the hands and arms of four days' duration. It appears that the patient was at work as usual on June 10th, apparently in his ordinary health, when he was suddenly seized with a tingling sensation in his hands and then in his legs, which afterwards extended up to the elbows and knees. He had the same feeling also in his face. He commenced to feel drowsy and his eyes felt heavy. He soon noticed that his hands and feet were somewhat stiff and shortly afterwards he had severe cramps in the same parts with acute pain. With some difficulty he was able to walk home, as he says that the legs did not share long in the extreme spasm but became only stiffened. His head was painful and he felt as if it and his tongue were swollen, and he had difficulty in articulation. Drowsiness supervened and he soon became very sick, vomiting a small quantity of bright red blood. The spasms in the hands, the arms, and the face occurred every six or seven minutes, giving him great pain, but during the interval the arms and

[1] THE LANCET, May 7th and 14th, 1887.
[2] Braithwaite's Retrospect of Medicine, 1890, p. 190.

hands remained in a contracted position and felt numb, cold, and dead. He said that he was not exposed to cold before the onset of his illness. He passed his urine naturally but it had been small in quantity and not voided at too frequent intervals. His bowels had always been constipated. Apart from "a fever" which he had when a child, the name of which he had forgotten, he declared that indigestion had been his only ailment. For twelve years he had been troubled constantly with headache, pain in the stomach, aggravated by food, and, as a rule, relieved by vomiting, and this vomiting had been more severe during the last few months. The vomited matter was sour to the taste and was of a greenish-yellow colour. He had never had rheumatism, swelling of the face and legs, or venereal disease. He had never had cramps before nor had he had convulsions as a child. There was nothing unusual in the family history except that his father was subject to indigestion and vomiting in the same way as himself. His father had never had cramps in the extremities to his knowledge.

On admission to the infirmary the patient was put to bed. He had a drowsy, unintelligent appearance; his eyes were partly closed and it was only with an effort that he could completely open them for a short time. He was slow in answering questions and his articulation was thick. The lips, the nails, and the backs of the hands and the forearms were livid. The arms and hands were cold. There was no œdema of the ankles or of any other part of the body, nor was there any clubbing of the finger tips or marked curving of the finger nails. The temperature was 98·6° F. and the respirations were 20. The pulse was of moderate tension, numbering 96 in the minute. The tongue was protruded in the middle line and was slightly tremulous; it was dry and fissured and was covered with creamy fur, and the papillæ were enlarged. The pupils were equal and small, but responded to light and in accommodation. The hands were equally bent at the wrists and were inclined to the ulnar side. The fingers were flexed at the metacarpo-phalangeal joints, although the terminal phalanges were in extension. The thenar and hypothenar eminences were contracted, leaving a cup-shaped depression in the palm, and the muscles of these eminences were in a state of tremor. The thumb was forcibly adducted into the palm and was partly covered by the fingers. (This position of the hand has been described by Trousseau as like the "accoucheur's hand.") The arms were bent at the elbows, but they could be straightened and the hands and fingers bent into their normal positions without causing pain. There was no contracture of the legs. The spasms occurred every few hours. During the spasm the arms were more bent at the elbows, the thumb was more forcibly pressed into the palm, and was more closely surrounded by the fingers. The forehead was drawn upwards and the sides of the mouth backwards, which gave the face a grinning expression. The abdominal wall was tense and hard. In the intervals between the spasms the muscles of the arms, the hands, and the fingers were in a state of semi-contracture although he had no pain. Greater pain was felt during the spasm in the left hand than in the right, and it was noticeable that the shape of the left hand was more altered than the right. There was nothing abnormal detected in the lungs on percussion or auscultation, although when he was asked to take a deep inspiration he performed a series of irregular jerking movements. The heart was perfectly normal. As regards the abdomen, the liver was of normal dulness; there was great resistance of the abdominal wall and no evidence on examination of a dilated stomach. The specific gravity of the urine was 1017, it gave an acid reaction, was of a pale amber colour, and there was distinct albumin but no sugar, bile, or blood. Tube casts were never found. The patient died on June 19th. The tetanic contracture of the muscles of the arms and hands were present to the last although the severe spasms only occurred at occasional intervals. Vomiting was a constant symptom and the vomited matter was usually of a dark-brown colour which gave no blood or biliary reaction and certainly was not in harmony with the idea of a dilated stomach. The urine which was collected always contained albumin, but otherwise it was not remarkable. During the last thirty hours before death only a few ounces were passed and at no time did there seem to be much urine in the bladder. On the day before his death the patient had a sudden attack of dyspnœa. He then became cyanosed and his respiratory efforts were irregular and jerky, with considerable periods of apnœa. His pulse became quicker and he was totally unconscious. He had another similar attack on the day of his death. The treatment consisted of chloral and bromide of potassium in frequent doses; calomel and croton oil were given for the constipation. The patient was fed latterly by the rectum and stimulants were freely administered. A post-mortem examination was obtained, but unfortunately permission to examine the head was refused. There were found marked gastric dilatation, cicatricial contraction of the pyloric end of the stomach, and marked enlargement and caseation of the glands around, with intimate adhesion to the wall of the stomach and the cicatrised area. For this description of the appearances presented at the necropsy I am indebted to Dr. Lewis Sutherland.

I now venture to make a few remarks on the causation, symptoms, neuropathic heredity, diagnosis, and pathology of the disease, with special reference to the case as above described.

Causation.—Kussmaul and Nönsten have noted transient albuminuria in two cases. This patient had albuminuria. Is the tetany, then, one of the sequelæ of Bright's disease, or is it the result of gastric dilatation? The former supposition is, I think, negatived by the facts that no blood or tube casts were found in the urine, that the patient never had œdema of the ankles, the face, or other part of the body, and that he never at any time had polyuria or deficiency of sight. The periods of apnœa which occurred towards the end of his life were not due to Cheyne-Stokes breathing, but rather to a spasmodic condition of the diaphragm and muscles of the chest interfering with the physiological processes of respiration.

Symptoms.—Before the onset of cramps the patient had certain nervous premonitory symptoms[1] such as tingling sensations in the extremities, a feeling of coldness of the limbs, drowsiness, heaviness of the eyes, and swelling of the head and tongue. There was no pain on extension of the fingers, hands, and arms as would have been expected. The contracture was not quite equal on the two arms, being greater on the left. The spasms commenced in the arms and hands and afterwards affected the legs and feet. A permanent stiffness of the legs and feet resulted after the first few spasms had occurred, while the severity of the spasm increased in the arms and hands and affected the muscles of the face and abdomen as well. Ross says that the muscles of the facial expression and tongue are rarely involved, and Gowers mentions that when the muscles of the face are involved it is usually a severe case. Although the spasms in this case were intermittent, especially at the commencement, yet towards the end there was a more continuous spasm, interrupted only at occasional intervals by contractions of a severer kind. Ross mentions that the mental faculties are always unimpaired. In this case they were undoubtedly dulled and the memory had likewise suffered.

Neuropathic heredity.—Abercrombie has noted cases where a distinct neuropathic heredity could be traced and also where several members of the same family had the affection. In the present case no such history could be discovered, although it is a curious and interesting fact that the patient's father has had symptoms referable to the stomach of a nature precisely similar to his own.

Diagnosis.—The order of the symptoms as they occurred in this case was closely analogous to that described by Trousseau in his article on Tetany. No other affection has a series of symptoms precisely similar. Hysterical contracture very commonly affects only one side of the body or individual members, while in tetanus prolonged contraction of the masseter muscle is an early and characteristic symptom. The "Trousseau phenomena," so graphically described and of such diagnostic importance, were not tried in this case. They consist: (1) in the production of spasm in the hands and arms by pressure on the nerves or vessels of the forearm; (2) in the increased irritability and excitability of muscles and nerves to both faradaic and galvanic currents (it has been observed also that only in cases of tetany do we get anodal opening tetanus); and (3) in the disappearance of the spasm when the affected part was immersed in cold water.

Pathology.—Numerous are the changes in the brain and cord which have been described by writers as probably the pathological lesion in cases of tetany, and still more

[1] Gowers: Diseases of the Nervous System, vol. ii., p. 648; and Ross; ibid., vol. i., p. 524.

numerous are the speculative theories which have been offered as to their causation. Thickening of membranes, small inflammatory areas in the brain cortex with exudation of leucocytes, hæmorrhages, and disorganisation of brain cells have been described and their significance discussed in cases of tetany, but are not similar changes frequently met with in many other diseases? The microscopical pathology of brain structure is yet imperfect and furnishes us with few positive data which can guide us in clinical observation. But is this lesion an affection of the centres—the brain or the cord—or is it due to pathological changes in the nerves? Russel[4] supposes it to be due to the unopposed operation of the cerebellar influence—a view supported also by Hughlings Jackson.[5] Gowers[6] thinks that the pathology of the disease is vague, but he believes that there is some affection of the nerves and cerebro-spinal centres, and this view is supported by many authorities. The suggestion that nerves themselves may be the seat of the disease is negatived by the fact that "muscular spasm is rarely caused directly by chronic disease of peripheral motor nerves."[7] The suggestion offered by Cheadle[8] appears to me to be a fairly reasonable one, and one which well accounts for the tetanoid contracture in the present case. It is that the body becomes debilitated from a gastric or intestinal trouble with the result that there is a general weakening of the nervous system, with a consequent over-excitability of the motor cells of the cord. This condition of over-excitability is the predisposing cause, but there is also an exciting cause, such as diarrhœa, teething, &c., which acts reflexly on the cells of the cord, causing a series of impulses to pass along the neur-axons into the nerves supplying the muscles and producing a tetanoid contracture. In the present case no doubt the patient's strength had been gradually undermined by deficient nourishment owing to gastric dilatation. We may then suppose the cells of the cord had become impoverished and over-excitable and that a temporary acute gastritis or the absorption into the blood of ptomaine substances produced by fermentative changes in the stomach had acted as exciting causes and produced tetany. It is not easy to show a causal relation between dilatation of the stomach and tetany due to heightened reflex excitability of the cord except on the supposition that in certain cases specific substances of the nature of ptomaines may be generated in the stomach by fermentative processes, and that these substances raise the excitability of the cells in the cord. It is only in rare cases of dilatation of the stomach that this condition is accompanied by tetany; but, on the other hand, while fermentative changes due to micro-organisms are always present in cases of dilated stomach, it does not follow that the products of fermentation are always the same. It seems more reasonable to conclude that the reflex excitability of the cord is heightened by the action of specific substances than that this is due merely to deficient nutrition, as has been suggested. Clinically, therefore, it is important to take the warning that a dilated stomach in which fermentative processes are going on may be the precursor of a serious disorder of the central nervous system. It must be admitted, however, that there is no proof that a state of debility from exhaustive disease causes hyper-excitability of the motor cells of the cord and consequent tetany. The condition is by no means so common as we might expect if this were the sole cause of the disease, and a consideration of this case and of the literature of the subject obliges me to conclude that its real origin is still obscure.

It was unfortunate that no examination of the head could be obtained after death; still, it is important to observe that had we not had the post-mortem examination I am afraid the presence of an excessively dilated stomach might have been overlooked, which would have left us in a greater uncertainty as to the source of the tetany and the fatal issue of this case.

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Glasgow.

[4] Practitioner, vol. ii. 1881, p. 341.
[5] Buzzard: Diseases of the Nervous System, p. 424.
[6] THE LANCET, July 21st, 1883.
[7] Sharkey: Brit. Med. Jour., vol. i. 1886.
[8] THE LANCET, May 7th and 14th, 1887.

SOME NOTES ON MALARIA AS SEEN IN RHODESIA.

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IN every form of disease it is an acknowledged fact that the vitality of the body must be lowered before the specific germs of any disease can begin to manifest themselves in the system, for it is self-evident that wherever we may be we are all of us breathing air laden with germs and that it is only the inherent vitality of our tissues which prevents us from falling victims to every disease we may come in contact with.

Malarial fever is to be found universally distributed all over the world, though in greatly modified forms where civilisation and consequent drainage of ground, good food, and comfortable dwellings are obtainable. In Europe, for instance, it is scarcely ever met with and most probably only in those who have previously lived in some parts of the tropics. In Rhodesia, as in most new countries, malaria is very prevalent owing to a variety of causes or conditions, a few of which I will enumerate. Those arising from the land itself, or "endemic causes," are: low-lying country, porous soil, alternate spells of heavy rainfalls and intense dry heat causing rapid growth of rank vegetation, which is quickly dried up and withered by the sun, and the heavy rains following convert the whole into a mass of decaying matter, most pernicious to those living near; also the overturning of fresh virgin soil, necessary in farming, appears to produce a severe form of malarial fever. The malarial poison also seems to be most virulent an hour before and an hour after sunrise and I have made cultivations of the malarial bacillus obtained at this time of the day from the grass and soil, but only to the height of 4 ft. from the level of the soil—a curious fact, and one with regard to which I should like to know whether it has been substantiated by the observations of others.

Another note of mine may prove of interest also: it is with regard to "horse-sickness," an almost always fatal disease, which I consider to be malarial fever in the horse, inasmuch as I have made cultivations from and obtained the malarial bacillus in the blood of an affected animal. Now it has been proved that horses will not develop this sickness if they are stabled an hour before sunrise and not let out again until about 9 or 10 A.M., when the grass is dry. Numerous cases I have noted have shown the following facts to be indisputable: (1) horses turned out to grass during the day and stabled at night seldom or never take "horse-sickness"; (2) horses left out all night but stabled before sunrise and not turned out to grass until 10 A.M. continue healthy; (3) horses kept in at night and turned out just before sunrise always get "horse-sickness" sooner or later; and (4) this "horse-sickness" is not contagious inasmuch as others in the same stable do not contract the disease.

The conditions which I consider facilitate a tendency to malarial fever, and which may be classed as "ethnological causes" are: excessive spirit-drinking (there is a recognised form of malarial fever termed "whisky fever"), poor quality of food (fresh meat and vegetables being quite unprocurable in parts), tinned meats, jams, vegetables—in fact, everything is tinned, and becomes in time quite nauseous.

Then, again, I find fever far more frequent amongst men than among women and more single men are victims than married ones. This I put down to the fact that women are not exposed to "roughing it" like men and that married men have home comforts which are impossible for the single. The following is a typical single life: there are "messes" at the different hotels, and most single men prefer joining one of these to feeding themselves in a solitary room about 12 ft. square by the light of a single candle (candles, remember, are valuable, being from 6*d.* to 1*s.* 6*d.* each); then, after dinner, he goes into the drinking bar—far more inviting than his own quarters—and is therefore bound to drink, and thus gradually acquires habits which sooner or later will land him in a severe attack of "whisky fever."

On microscopical examination of the blood of a patient suffering from an attack of malaria the observer finds numbers of red corpuscles shrivelled up and blackened and

others containing bacilli of a crescentic form. The white corpuscles are greatly increased in number and there are also seen numerous giant white corpuscles with patches of black colouring matter in them. The pathology of this I take to be: (1) the crescentic bacilli of malaria invade the red corpuscles and proceed to absorb the hæmoglobin, converting it into melanin, and they also multiply in number (these facts I have demonstrated by examining the blood of a patient subject to malarial fever, but about three hours before an attack of rigors was expected); and (2) after a variable time the red corpuscles burst, setting free crowds of bacilli (this process I have found in blood taken at the period of rigors); the giant white corpuscles absorb the bacilli and apparently digest them, leaving only the melanin which remains as black patches in the corpuscles (this process may be traced by examining the blood of a patient at intervals during a typical attack of fever). The effect of the malarial poison shows itself differently in different individuals, the most usual form being that of high fever, the period of incubation being in most cases fourteen days, during which time the patient has a great feeling of *bien aise*. Towards the end of the incubation he becomes irritable and chilly, generally suffering from nausea, sometimes actual vomiting. At this period he begins to have a succession of rigors, which, however, gradually cease and he becomes feverish, with a full, bounding pulse. Without drugs this stage lasts from six to eight hours, when he begins to perspire, the temperature falls, and he sleeps for several hours, awakening without fever. After a length of time, varying from twenty-four hours to a week, if the person has not been placed under the influence of drugs the fever occurs again in exact similitude to the initial attack and this may recur at intervals for months. There is also a variety of malarial poisoning without much elevation of temperature, but with marked cerebral symptoms resembling meningitis. It is a most fatal variety and post mortem no signs of inflammation of the meninges can be seen.

Residents in Rhodesia are also, I find, liable to attacks of dysenteric diarrhœa which will not yield to opium or ipecacuanha, but rapidly gives way to tincture of perchloride of iron with quinine and arsenic. I have also seen what were apparently syphilitic ulcers, especially on the legs and thighs, which proved most obstinate to the usual specific treatment, but got well at once with the iron, arsenic, and quinine mixture, with a dusting powder of quinine locally. On healing these ulcers leave a permanent brown stain on the skin. I consider both diarrhœa and ulcers due to malarial poison and the brown discolouration of the skin is possibly the local deposit of melanin from the bacilli.

The sequelæ of malarial fever are only what may be naturally expected, the first and most important being the intense anæmia which is so often found and which requires lengthy treatment by iron and arsenic with, if possible, change of air. This anæmia causes anasarca of the most dependent parts—viz., legs and feet—but this cures itself as the anæmia decreases, as also does the intense weakness, amounting in some cases to temporary paralysis; whilst another result of the poverty of red-blood corpuscles is shown in the dizziness, partial blindness, and flashes of light experienced by some on recovering from a severe attack.

With regard to treatment every treatise on medicine and also the so-called popular handbooks describe quinine as a "sheet anchor" in malarial fever, but my experience tells me there is no greater mistake. The result is that nearly everyone coming to Africa brings enormous quantities of quinine tabloids, which they take *ad lib.*, and also dose their friends, independently of any advice from a medical man, and they fully believe they are rendering themselves proof against fever. These large doses of quinine—and it is not uncommon to find persons taking from two to three drachms a day—produce an utter rottenness of the constitution. There is a distinct quinine cachexia, easily recognised by those who see it often, and when one of these individuals falls a victim to an attack of fever he generally has it badly. I have found the most successful treatment to be absolute rest in bed, a 15 gr. dose of antipyrin to begin with, followed in an hour by the following mixture: 10 minims of tincture of perchloride of iron, 5 minims of hydrochloric solution of arsenic, with water to 1 oz. 1 oz. to be taken every four hours with a 5 gr. tabloid of sulphate of quinine. At bedtime I generally give about 5 gr. of calomel, followed in the morning by a dose of some effervescent saline. In most ordinary cases of fever this treatment cuts short an attack under twenty-four hours and then I follow up with a tonic course of Easton's syrup in 1 dr. doses with 1 oz. of water three times a day at meals for a month, and I find that most individuals will thus enjoy an immunity from malarial fever for some months at least, although living in an unhealthy district.

With regard to food stimulants are required, especially champagne. This will often stop the obstinate vomiting when even a mustard poultice at the pit of the stomach fails. During an attack I order milk and hot water in equal parts, and in some cases milk with a tablespoonful of brandy to each pint. When the temperature is normal and the paroxysm is over I give any food the patient fancies, and I find this answers well. I have one patient who after an attack of fever eats ravenously of cheese, enjoys it, and, what is more to the point, digests it.

In the "cerebral apyrexial form" as I term that variety with low temperature and head symptoms, which is very fatal, I find, so far, that the best treatment is calomel and sulphate of magnesia in full doses, producing free purgation, giving at the same time the quinine, iron and arsenic as in an ordinary attack. It is happily a rare form. I have only seen 6 cases, of which 1 was fatal; the rest recovered, 3 completely and 2 with some mental aberration, which I am in hopes will prove only temporary.

In Africa "ice-bags" are an impossibility, and yet how often one longs for them. Here, where medical men are rare, being often from 85 to 100 miles apart, it stands to reason that there are many farmers and traders who when they get fever cannot obtain medical advice. For these Messrs. Burroughs, Wellcome, and Co. have prepared cases for me containing five bottles and a thermometer. These contain 25 (5 gr.) tabloids of antipyrin; 100 (5 gr.) tabloids of sulphate of quinine; 100 "Iron and Arsenic Co." tabloids; and 200 (1 dr.) tabloids of Easton's syrup. I order possessors of these when "shakes" begin to go to bed and take three 5 gr. tabloids of antipyrin and one hour afterwards to take one each of quinine and iron and arsenic tabloids, repeated every three hours until the temperature is normal; then to begin with the Easton syrup tabloids, taking one three times a day for a month, and in every case I have been told that these drugs and directions have proved a boon; and whereas the traders, &c., at outlying stations have previously suffered all the wet season from malarial ague, now the initial attack is all they experience for the season.

To sum up, it must be remembered in every case that the malarial parasite destroys the red blood corpuscles, and one method of treatment is to replace them and so raise the vitality of the tissues that they may resist further invasions of the poison.

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DISSECTING ANEURYSM.[1]

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THE term "dissecting aneurysm" is applied to cases in which a partial rupture of the inner tunics of an artery allows the blood to become diffused between the coats of the vessel. Having regard to the difference of opinion which exists as to the author of the original description of this very remarkable affection the following extract from Peacock's[2] "Report on Cases of Dissecting Aneurysm" may be of interest: "It has generally been supposed that Laennec was the first writer who applied the term 'dissecting' to this form of aneurysm, but it has been recently shown by Broca that Maunoir employed the same designation and clearly described the formation of aneurysms of this kind in his work published in 1802. A characteristic case is also related by Allan Burns in his work on 'Diseases of the Heart and Aneurysm,' published in 1809." Shekelton[3] published two cases of dissecting aneurysm in 1822, and the preparations are to be seen in the museum of the Royal College of Surgeons in Ireland. Erichsen, in the eighth

[1] A paper read before the Medical Section of the Royal Academy of Medicine in Ireland, May 20th, 1898.
[2] Transactions of the Pathological Society of London, vol. xiv., 1863.
[3] Dublin Hospital Reports, vol. iii., 1822.

edition of his "Science and Art of Surgery," incorrectly refers to this variety of aneurysm "as originally described by Shekelton," and the use of the name "Shekelton's aneurysm" as a synonym for "dissecting aneurysm" is to be deprecated. Peacock, in the paper to which I have already referred, collected 60 instances in which the affection appeared in well-marked form, including 5 Dublin cases published by Shekelton,[4] R. W. Smith,[5] Kirkpatrick,[6] Lees,[7] and MacDonnell respectively. An interesting specimen was exhibited by Connolly Norman at a meeting of the Pathological Section of the Royal Academy of Medicine in Ireland a few months ago. In the earlier published cases of dissecting aneurysm it was supposed that the separation of the tunics of the artery took place between the middle and external tunic; but modern pathologists agree that the blood almost invariably makes its way between the laminæ of the middle coat, so that the outer wall of the aneurysm is formed of the outer strata of the media together with the adventitia. In the vast majority of cases the rupture of the inner tunics is due to their excessive lacerability, the result of atheromatous degeneration. Indeed, out of 60 of Peacock's cases the artery was found healthy in only two instances. Ziegler[8] suggests that in the rare absence of morbid changes in the coats of the vessels, traumatic injury to, or defective development of, the vessel wall is the primary cause of the lesion, and Walshe[9] mentions 2 cases in which dissection of the aortic coats on a limited scale had been abruptly effected as the result of a railway concussion. On the other hand, Rokitansky[10] supposes that in some cases a morbid condition of the external coat deprives the inner coat of support and so predisposes to their rupture.

Dissecting aneurysm is practically confined to the aorta and its large branches, although Ziegler[11] states—on what authority I do not know—that the small arteries of the brain are a usual seat of the affection. The internal rupture is usually situated at the origin of the aorta or in the ascending aorta (it was so in 55 out of 73 of Peacock's cases) but it has been found as low as the end of the abdominal aorta, as happened in Shekelton's cases. The direction of the rupture is generally transverse when it is near the aortic valves, whilst it is more frequently vertical at the beginning of the descending aorta. Ordinarily from one-half to two-thirds of the vessel is torn asunder, although the whole circumference of the artery is occasionally separated. The longitudinal extent of the separation of the tunics varies considerably. As a rule the aneurysm does not extend beyond the ascending aorta, though it is occasionally found to extend into the iliac arteries. In my case the separation of the coats begins at the arch and ends in the left femoral, and in a very remarkable case recorded by Tessier[12] the separation extended from the commencement of the ascending aorta to the left popliteal artery. The dissection not unfrequently is carried along the primary branches of the aorta; for instance, in MacDonnell's[13] and Tessier's[14] cases it extended along the innominate and its branches to the internal carotid; in another case[15] it followed the course of the coronary arteries; in Laennec's[16] case it passed along the cœliac artery and in my case along the right renal artery. Some of the intercostal and lumbar arteries are frequently found to be cut across by the stream of blood "so that a probe introduced into the aortic orifice of one of those little branches passes directly into the aneurysmal canal and traverses this before entering the artery itself, which thus appears to arise directly from the aneurysm."[17] In cases which have ended fatally within a short time there has been only a single opening leading from the aorta into the arterial coats, death having been usually due to the subsequent giving way of the external wall of the sac. This is the common form, comprising 73 out of Peacock's 80 cases. My case is also an instance of it. On the other hand, when life is prolonged for any considerable time the blood is found to have forced its way from the subadventitious sac back again to the blood-stream at some point further on in the course of the vessel. In such chronic cases the new blood-channel acquires an endothelial lining. Shekelton's[18] and Fagge's[19] cases were examples of this variety. The disease is specially common in persons of advanced age, and though it probably occurs more frequently in men than in women there is not the excessive preponderance in males which is the rule in ordinary aneurysms. Indeed, some writers say that it is more common in women. The case which I now relate and the specimen which I exhibit typically exemplify the symptoms and pathology of the early stage of the fully formed dissecting aneurysm.

A man, aged sixty-five years, a house-painter by occupation, was admitted to the Whitworth Hospital under my care on Jan. 13th, 1898, complaining of severe pain in his back and of loss of power in his legs. On the morning of his admission to hospital he was on a ladder papering a room when he was suddenly seized with a violent pain in the lower part of his back and in his left hip. The pain appeared to begin in the lumbar region and to shoot up into his chest and downwards towards his left thigh; it was so intense that, to use his own expression, he "bellowed with agony." He felt faint but did not lose consciousness, and he was able with difficulty to walk across the room to a chair. Within a quarter of an hour his lower extremities were completely paralysed and his left leg was anæsthetic. He was sent to the hospital in a few hours. Beyond the fact that he was a painter there was nothing noteworthy in his personal history and he came of a healthy family. On admission to the hospital he was seen to be a well-nourished, grey-haired old man, but rather anæmic. He was unable to walk, but he could move his legs slightly. He still suffered from severe pain in his back and everything he ate or drank was vomited. He had no longer anæsthesia in his left leg. His arteries, in which there was visible pulsation, were atheromatous and his pulse was high-tensioned. His heart was hypertrophied; no murmurs were audible, but the aortic second sound was greatly accentuated. No sign of aneurysm could be detected, although the patient was carefully examined for it. There was marked arcus senilis and he had a "lead-line" on his gums. His urine was feebly alkaline; its specific gravity was 1014. It was clear and contained 0·2 per cent. albumin and a few hyaline and granular casts; neither sugar nor blood was present. The quantity of urine passed was about the average amount, and he had perfect control over the sphincters of the bladder and rectum. The pain in his back ceased after 12 hours and next day he felt much better and he was able to move his legs freely. The knee-jerks and plantar reflexes were absent. On the following morning he was able to walk a few steps and he expressed himself as feeling almost well. At this period I showed him to the hospital class and diagnosed the case as plumbism and chronic interstitial nephritis with the usual cardio-vascular changes. I pointed out that the history of the attack clearly indicated some vascular lesion of the spinal cord and that the sudden onset, wide diffusion, and intensity of the pain, together with the transient duration of the paraplegia, appeared to justify the further diagnosis of spinal meningeal hæmorrhage. The patient was apparently well about 4 P.M. when he took a drink of milk. Five minutes afterwards he was found dead in his bed, his death having thus occurred about 52 hours subsequent to the onset of the symptoms.

Necropsy.—The post-mortem examination, which was made within 24 hours of death, showed the right pleural cavity to be filled with blood. The pericardium contained a little clear serous fluid. The heart was rather large, there being hypertrophy of the left ventricle. The arch and upper part of the descending aorta were distended, forming a tumour-like mass from which the blood had escaped by a small rent into the right pleura. On opening the aorta its inner aspect was covered with atheromatous plaques and calcareous plates and a dissecting aneurysm extended from the arch at the level of the innominate artery and terminated in the left femoral artery about an inch below Poupart's ligament. A large mass of freshly coagulated blood was effused between the tissues at the level of the arch and the upper portion of the descending thoracic artery, and here the separation of the tunics took place around nearly the whole circumference of the vessel

[4] Ibid.
[5] Dublin Journal of Medical Science, vol. ix., 1836.
[6] Ibid., vol. xiv., 1844.
[7] Ibid., vol. xv., 1844.
[8] Special Path. Anat.
[9] Diseases of the Heart.
[10] Manual Path. Anat.
[11] Special Path. Anat.
[12] Giornale della Scienza Mediche, 1842.
[13] Dublin Journal of Medical Science, vol. xvi., 1845.
[14] Giornale della Scienza Mediche, 1842.
[15] Boyd: THE LANCET, Jan. 23rd, 1841.
[16] Traité de l'Auscultation Mediate, 2me. ed., 1826.
[17] Fagge: Transactions of the Royal Medical and Chirurgical Society, vol. lii.
[18] Dublin Hospital Reports, vol. iii., 1822.
[19] Transactions of the Royal Medical and Chirurgical Society, vol. lii.

wall. From the abdominal aorta through the left common iliac, external iliac, and femoral artery the coats of the vessels were separated by a thin layer of coagulum, but no palpable thickening of the arteries was so produced. In the lower part of the aneurysm the dissection of the arterial coats did not extend much more than half-way around the circumference of the vessels.

The microscopic sections which I exhibit are from the left common iliac artery and they show that the blood is effused in the substance of the middle tissue of the artery, so that the external wall of the aneurysmal canal is composed of the outer strata of the media together with the adventitia. The dissection was carried along the coats of the right renal artery, which was also occluded by a thrombus. The lumbar arteries were cut across and their orifices likewise contained thrombi. A large coagulum was adherent to the posterior wall of the aorta at the level of the renal and lumbar arteries. I have not been able to satisfy myself as to the position of the internal rupture of the aorta. There are many degenerated spots in the inner coat of the vessel through which it might have occurred, or possibly it took place at the origin of one of the primary branches of the aorta. The capsule of the left kidney was adherent, the organ being cirrhotic; the right kidney was in a similar condition and was, in addition, cystic; it was extremely engorged with blood and the microscopic sections (which were prepared by Dr. Dargan in Dr. MacWeeney's laboratory) show that a universal hæmorrhagic infarction was present. There was no hæmorrhage in the spinal cord or its membrances. In the light of the necropsy it is not difficult to account for the symptoms of this case. As predisposing causes of dissecting aneurysm the patient had extensive atheroma of the inner coats of his aorta, which was consequently unduly lacerable, and in addition he had hypertrophy of the left ventricle with high arterial tension. The intense pain at the onset of the symptoms was due to the primary rupture and separation of the coats of the aorta by the blood. The paraplegia was caused by the interference with the arterial supply to the lumbar region of the cord, partly from thrombi in, partly from rupture of, the origin of the lumbar arteries. The sudden death ensued on the rupture of the external wall of the aneurysm and the consequent escape of blood into the right pleural cavity. It is rather remarkable that the urine contained no blood and that the amount passed was not noticeably diminished, for the functions of the right kidney must have been completely arrested.

Other cases of dissecting aneurysm have been recorded in which a remarkable series of symptoms was due to the arrest of vascular supply to the brain, kidneys, or cord. Tessier's[20] patient died with symptoms of apoplexy, and a dissecting aneurysm was found extending from the arch of the aorta along the innominate artery and its branches to the internal carotid. Todd's case[21] was characterised by hemiplegia and suppression of urine, and the post-mortem examination showed softening of the brain due to obstruction in the carotids, and the renal arteries were also obstructed. Sainet[22] records a case in which the patient became rapidly paraplegic. In Dickenson's[23] case a policeman after seven hours on his beat was seized with loss of power over his lower extremities, followed by pain, collapse, and death in twenty-four hours. Swaine's[24] case was diagnosed during life, the patient having been suddenly seized with pain in his chest followed by paraplegia. Where the symptoms are liable to such variation it is evident that the diagnosis of dissecting aneurysm must be always difficult and uncertain. In reference to treatment Walshe[25] remarks: "Were the practitioner fortunate enough to divine the occurrence of acute separation of the coats of the aorta it does not appear that, in the present state of our knowledge, the management of the case would be materially improved by his sagacity. Did he fail to diagnose the occurrence, his aim would be to restore the patient from the first shock of the accident, control excited arterial action, and relieve the symptoms as they arose. And it does not appear that art could do more than this were the anatomical nature of the affection understood from the first."

Dublin.

[20] Giornale della Scienza Mediche, 1842.
[21] Todd: Transactions of the Royal Medical and Chirurgical Society, vol. xxvii., 1844.
[22] Bulletin de la Société d'Anatomie, 1851.
[23] Transactions of the Pathological Society of London, vol. xiii.
[24] Ibid., vol. vii.
[25] Diseases of the Heart.

A CASE OF DOUBLE LOBAR PNEUMONIA COMPLICATING INFLUENZA DURING THE COURSE OF ACUTE MANIA.

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THE following is a case of some interest, showing as it does the possibility of recovery from double pneumonia complicating influenza under conditions of such special difficulty as to render the prognosis almost certainly fatal.

The patient, a woman, aged thirty-seven years, was admitted into the Coppice Hospital, Nottingham, on March 18th, 1898, suffering from acute mania of three weeks' duration, her leading mental symptoms being extreme restlessness, hallucinations of sight and hearing, and obstinate refusal of food. She professed inability to walk and had to be carried to her room. On examination there were no signs of organic disease except at the apex of the right lung, where there was evidence of consolidation, which from the history was presumably tuberculous in character. The pulse was 84 and the respirations were 22 per minute, while the temperature was normal. The pupils were equal and reacted (though somewhat sluggishly) to light. The muscular power generally was fair, but the knee-jerks were greatly exaggerated. The patient was said to be of a highly excitable disposition and for several years had been subject to attacks of *petit mal*. After admission she was very troublesome in the matter of food, being only induced to take it after much persuasion, while the use of the nasal tube was necessary on one or two occasions. On the 22nd the patient had a slight cough and on the following evening the temperature was found to be 101·4° F., but the rate of respiration was not accelerated; the pulse was 92 per minute and no abnormal signs were found in the lungs apart from the condition at the right apex. On the following morning the temperature had fallen to 99·4° and in the evening it was normal; during the night, however, the breathing became very rapid and the face cyanosed, and the night nurse, becoming alarmed at the patient's condition, sent for the medical officer, when the respiration was found to be 60 per minute, the temperature 103·4°, and the pulse very rapid (160 per minute) and of so feeble a quality that a hypodermic injection of 15 minims of ether with $\frac{1}{30}$ gr. strychnine was given, upon which the patient rallied a little. She was then put on strychnine ($\frac{1}{60}$ gr. hypodermically every six hours) and fed four times daily through the nasal tube as it was impossible to get her to take food otherwise and the bowels were acting so frequently that rectal feeding would have been useless. At 6 P.M. the temperature had risen to 105° and the pulse was 168. Signs of consolidation were now observed over the lower hand's breadth of the right lung behind, the previous examination having given negative results. The patient's condition now appeared to be very grave and death was looked upon as imminent. She was fed, however, and 10 gr. of quinine were given with the food, the temperature dropping in the course of an hour to 103·2°, while the pulse had greatly improved. During the whole of the day the patient had been trying to throw the bedclothes off and had passed urine and fæces under her. On the 25th the temperature at 8 A.M. was 102·4°, and at 6 P.M. was 105·4°. The same treatment was adopted as on the previous day and the result was similar. On the 26th there was evidence of consolidation over the whole of the right lower lobe and a patch of a similar character at the left base. The temperature rose as on the last two evenings and fell under the influence of the same treatment. 5 gr. of quinine were now ordered three times a day. The feeding and injections of strychnine were to be continued as before. On the 27th signs of improvement began to manifest themselves, the temperature being 101·4° at 8 A.M. and 103° at 6 P.M. The case now progressed favourably, the injections of strychnine being discontinued on the 29th and the temperature falling to normal for the first time on the 30th. A slight recrudescence of fever which occurred on April 4th was attributed to the regurgitation and inhalation of a portion of her food during her feeding on the previous evening. After this the temperature dropped steadily to normal, the recovery being uninterrupted, while the signs of consolidation which had involved the whole of

the two lower lobes had cleared up almost completely on April 10th. The patient is now much stouter than on admission and is in a condition of obstinate melancholia, refusing her food and having to be fed four times daily with the nasal tube.

The main point of interest in this case is the apparent proximity of death and the recovery under particularly unfavourable conditions. The patient was very much exhausted by her maniacal attack and added to our difficulties by her refusal of food, constant attempts to get out of bed, uncleanly habits, and violent resistance to anything done for her benefit or comfort. The irregularity of the temperature and the absence of a definite crisis are probably due to the pneumonia occurring as a complication of influenza. The effect of the strychnine injections upon the pulse was very marked as was also that of the quinine upon the high temperature. It is remarkable considering the severity of the fever that the patient was able to retain so large a quantity of food as was administered on each occasion through the nasal tube, the amount given altogether in the twenty-four hours consisting of 4 pints of milk, 6 eggs, and 6 ounces of brandy. To this somewhat unusual power of digestion the recovery of the patient is, no doubt, in great part due.

I am indebted to Dr. Tate for permission to publish this case.

Nottingham.

A CASE OF TEMPORO-SPHENOIDAL ABSCESS; TREPHINING; RECOVERY.[1]

BY HERBERT J. ROPER, M.R.C.S. ENG., L.R.C.P. LOND.;
AND
H. LITTLEWOOD, F.R.C.S. ENG.

A GIRL, aged fourteen years, had had a purulent discharge, which latterly had been offensive, from the left ear for two years. She came of an unhealthy stock, her father and mother being distinctly delicate and her grandmother showing scars all over her body the result of necrosis of bone, probably syphilitic. On June 11th, 1897, she complained of severe pain in the left ear and corresponding side of the head, which nothing appeared to alleviate. On the 13th the headache was still intense, but the earache had ceased. There was only a slight rise of temperature—generally about 101° F. On the 14th she was practically free from pain and on the following three days it was noticed that her memory was defective for common objects in the room. She was unable to name a spoon, fork, knife, chair, &c. As soon as the word was mentioned she recognised it and could pronounce it, but she forgot it again almost immediately. A slow pulse (50) and occasional vomiting were her other symptoms. On the 23rd her temperature was 101°, her pulse was 50, and her respirations were 12. She was drowsy and wished to be let alone. When roused she was childish in her manner and voice, quite different from her usual condition. She remembered dates well, but could not tell the name of any of the surrounding objects in the room. She had taken a dislike to many people of whom she had previously been fond and would have nothing to do with them. There was no disturbance of sensation or power of movement on either side. Optic neuritis was present on both sides. The ear was being carefully syringed with an antiseptic lotion and there was no discharge perceptible. The next day, however, the ear began to "run," but she was more drowsy than the day before, and the vomiting persisted and grew worse. On the 25th the temperature was normal, the pulse was still slow, but she was not so drowsy. During the day, though, the drowsiness increased and became more and more pronounced during the following three days until it resolved itself into coma. She took nourishment fairly well, retaining some. On the 27th and 28th she passed urine and fæces into the bed. The temperature continued normal. During the 29th the right arm became strongly flexed and remained motionless in that condition. On the 30th she was comatose but still able to swallow liquids; the right arm was paralysed and the right leg was much weaker than the left. I strongly advised operation at this stage, to which the parents readily consented. Mr. Littlewood at my request performed the operation. I administered ether, of which very little was required. Mr. Littlewood, assisted by Mr. F. E. Taylor, first exposed the mastoid process by a semilunar incision down to the bone and by chiselling opened the antrum until there was a free communication with the external auditory meatus. Some purulent material was found and the cavity was cleansed. He next dissected back a large semicircular flap and then proceeded to trephine over the petrous portion of the temporal bone. On pressing aside the dura mater the anterior surface of the petrous bone was well exposed but nothing was found here. The dura mater was perfectly healthy. Mr. Littlewood then proceeded to remove bone in a backward direction with Hoffmann's cutting forceps until he had exposed the membranes over the temporo-sphenoidal lobe. He then opened the dura mater and exposed the brain, which bulged out and did not pulsate. With a large trocar (Macewen's) he punctured the brain and immediately very offensive, thin, yellowish-green pus, with thick flakes of lymph floating in it, rushed out. The trocar was withdrawn and Mr. Littlewood plugged the opening with his finger in order to allow the pus to escape slowly, so that the intracranial pressure might not be too rapidly reduced. When the pus had all escaped the cavity began at once to shrink. This was then well washed out with boiled water by means of a syphon. Several large flakes of lymph came away with the water which returned. The large scalp-flap, which had become soiled by the discharge, was well washed with boiled water and afterwards with weak carbolic lotion. A drainage-tube was inserted into the abscess cavity and the flap was stitched up with silk sutures. The antrum was packed with iodoform gauze and a dressing of boric wool was applied over the whole. The condition of the patient at the end of the operation was wonderfully good; the extremities were warm and the pulse was 120 and fairly full. Before we left the house she moved her right arm. At 9.30 the patient was asking for food. Milk and soda-water in small quantities were given. On July 1st she had had a fairly good night. She moved her arm quite well and her mental condition was distinctly improved. Her temperature was normal and her pulse was 120. There was no pain. She asked for solid food. The dressing was changed. She had been asking her mother if the knocking had ceased, which appeared to refer to the chiselling. On the 2nd the temperature was subnormal. The patient was bright and cheerful but still amnesic. She took nourishment well. Hernia cerebri had formed. On the 4th the tube was removed and the scalp wound had nearly healed. The hernia continued to increase in size for some days until it was of the size of a Tangerine orange, when it slowly began to shrink. On the 22nd she sat up for a short time daily and was able to read and remember names of objects much better, though she still made mistakes. The antrum was filling up. Pressure was applied to the hernia after a time by means of a piece of thin sheet lead shaped to the hernial protrusion. After this it rapidly decreased in size and towards the end of September disappeared altogether and the wound healed over. The patient's memory gradually improved and now is almost normal. At the present date (March 10th, 1898) she is remarkably well in every respect.

Leeds

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Feb. 4th, 1898.

THREE CASES OF MYOMATA OF THE UTERUS COMPLICATING PREGNANCY;

PAN-HYSTERECTOMY PERFORMED IN TWO CASES AND SUBPERITONEAL HYSTERECTOMY IN THE THIRD; RECOVERY IN EACH CASE.

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I VENTURE to record these three cases because cases of myomata of the uterus complicating pregnancy are of comparatively rare occurrence and when met with, owing to the rapid growth which the myomata take and the symptoms they produce, are a source of grave anxiety to the medical

attendant and of danger to the patient. Abortion not unfrequently occurs, when the risk of septic poisoning and hæmorrhage is very great owing to the myomata interfering with the proper contraction of the uterus.

CASE 1. *Large fibro-myoma of the uterus complicated with pregnancy; pan-hysterectomy; recovery.*—The patient was a woman, aged forty years, who had been married for twenty years. She had had no family and no miscarriages and had always been quite regular, but there was no menorrhagia. She was a stout, healthy-looking woman and had always enjoyed good health. She consulted me on July 15th, 1894, with the history that she had about two months previously noticed a lump in her abdomen, which had of late increased very rapidly in size. She had had amenorrhœa for the last three months. The breasts were somewhat full with pigmented areolæ. She complained of a good deal of pain over the tumour. In the abdomen a hard rounded tumour was readily felt, which reached as high as the umbilicus; springing from this tumour another boss was felt on the left side. By bimanual examination these tumours were found to be connected with the uterus. As there were no urgent symptoms and as there was a question as to her being pregnant, she was advised to wait and report herself again in a month's time. On August 10th her husband called to see me, saying that his wife had been very seriously ill and that Mr. W. Newbery, her medical man, was very anxious respecting her condition. She had had high temperature and one or two rigors. I gave an order of admission into the Cancer Hospital. On admission the patient was very collapsed and in great pain. She had had a slight rigor and was sweating a great deal. The tumour had increased considerably in size, reaching some two or three inches above the umbilicus. Fœtal souffle could not be heard. *Per vaginam* the os could be reached with difficulty. The patient was placed in bed and was kept perfectly quiet for two days. She had no more rigors. Her night temperature reached 102° F. and she was obviously getting worse. On August 14th, under ether, with the assistance of Mr. Cotterell, I proceeded to operate. A long incision was necessary, extending for two inches above the umbilicus. The tumour was then expressed and the broad ligaments with the ovarian and uterine arteries were tied. The anterior and posterior flaps of the peritoneum were reflected. A large speculum was introduced into the vagina and the peritoneal flaps were reflected quite down to the vaginal roof, which was divided anteriorly and posteriorly. A ligature was applied to the two lateral undivided portions, the tissues were cut through, and the uterus with its myomata lifted out. All the ligatures were left long and drawn down through the vagina. Sutures were then passed through the peritoneal flaps and formed into long loops which were also passed out through the vagina. By this manœuvre the flaps were brought down in such a manner as to cause the peritoneal flaps to be in accurate apposition. The toilet of the peritoneum was attended to and the abdominal wound closed by single silkworm gut sutures passing through the whole thickness of the parietes. The patient made an uninterrupted recovery and was discharged from the hospital on Sept. 15th, just a month after the operation, she having been up for ten days before. On examination of the tumour a soft elastic prominence was felt in the posterior surface. On cutting into this a fœtus was discovered which had apparently been dead for some days.

CASE 2. *Large fibro-myomata of the uterus complicated with pregnancy; pan-hysterectomy; recovery.*—The patient was a woman, aged thirty-seven years. She had one child ten years old; she had had none since and no miscarriages. She had had amenorrhœa for four months. Mr. E. Bellis was sent for to see the patient in the middle of March. She was then suffering from most distressing vomiting. On examination he found a large tumour occupying the abdomen which had increased very rapidly of late. She believed herself to be pregnant, a belief which Mr. Bellis confirmed. The size of the tumour, however, clearly pointed to its existing apart from pregnancy. The patient suffered much pain from the pressure of the tumour and from the irritation to the bladder. I saw the patient with Mr. Bellis on March 21st, 1897. I found a large, smooth tumour extending some 2 in. above the umbilicus and situated to the left of the middle line. *Per vaginam* another growth was felt in the pouch of Douglas, pushing down the posterior fornix. It was with great difficulty that the os could be felt, situated high up in front of the last-named growth. The vagina was filled with a dark grumous fluid of the colour of coffee grounds, evidently blood-stained, which was escaping from the os. The discharge had a faint disagreeable smell. By auscultation over the abdomen the fœtal bruit was thought to be heard at a spot between the large tumour in the abdomen and the vaginal tumour. The question of treatment was discussed, and in view of the difficulty of reaching the os and the extremely high rate of mortality attending attempts at abortion I decided to negative this form of treatment. Next the question of leaving things as they were and awaiting further developments was discussed; this also was thought to be inadvisable owing to the reduced state of the patient, the pressure of the tumour upon the bladder, the possibility of the fœtus being dead, and, finally, owing to the large growth which existed in the posterior as well as in the anterior wall of the uterus, the chances of pregnancy extending to its full term being very remote, and the great danger to which the patient would be exposed if such a course were adopted. It was then decided to recommend the removal of the whole organ, my advice being strengthened by the good results which followed the operation in Case 1. The patient was admitted into a surgical home and with the assistance of Dr. Purcell and Mr. C. N. Barton, Mr. Bellis being present, I performed pan-hysterectomy on March 23rd. The patient made a perfectly good recovery and returned to her own home on April 19th. She has remained perfectly well since.

CASE 3. *Large fibro-myoma of the uterus complicated with pregnancy; the vagina filled by the tumour; subperitoneal hysterectomy; recovery.*—The patient was a married woman, aged thirty-nine years. She had had no children. She was sent to me by Dr. Macpherson Lawrie of Weymouth on April 20th, 1898, suffering from a large fibro-myoma of the uterus with suspected pregnancy of about from two to three months. She had been married for three years and had had no children or miscarriages. Menstruation, which commenced at the age of fourteen years, had always been regular but there was severe dysmenorrhœa; the last period was in the middle or at the end of January. The patient noticed that her abdomen was enlarging shortly after her marriage, but she had not suffered any inconvenience from it until a month previous to admission, when she had some difficulty in micturition. Since this time her urine had become very offensive and she could only pass it when lying down. The abdomen was felt to contain a large tumour which extended upwards to about 2 in. above the umbilicus. The upper part of the tumour was hard and resisting; the lower portion, which extended from the pubes to within an inch of the umbilicus, was soft and boggy; this portion appeared to be of about the size of a cocoanut. *Per vaginam* another tumour was found completely filling the pelvis; the uterus was drawn upwards and owing to this tumour it was impossible to feel the os. Bimanually this and the tumour in the abdomen were found to be connected, and the whole was firmly wedged into the pelvis and was very immobile. The bladder sound was passed with difficulty, and by it the soft, boggy tumour above the pubes was found to be the bladder. Auscultation revealed nothing. The urine was loaded with pus and contained some blood. The areolæ around the nipples were very slightly pigmented. After consultation it was decided to operate with a view of removing the entire mass. On April 23rd, the patient being placed under ether, I performed abdominal hysterectomy by the subperitoneal method. The patient made an uninterrupted recovery. The bladder at the time of the operation was found to be enormously thickened and dilated. On examination of the specimen the uterus was found to be strongly retroverted, the os being above the pubes, situated between the abdominal and vaginal tumours; the uterus was found enlarged and the walls somewhat soft and evidently contained a foreign substance. On cutting into the uterus a fœtus of about ten weeks was found.

Remarks.—I have reported these three cases, as they are, I think, of great practical importance. It is well known that fibromata often increase rapidly during pregnancy. This is more marked in the case of interstitial fibroids, single or multiple, with enormous thickening of the uterine tissue. This increase in size of the fibroids exaggerates the symptom of compression, to which it may have already given rise, and the pain resulting from the pressure upon the sacral plexus often is very intense. These symptoms are the more pronounced in the pelvic variety, when the fibroid develops below the brim of the pelvis, having its origin in the supravaginal portion of the cervix or lower part of the body of the uterus. In Case 3 such was the case and symptoms from compression upon the bladder, ureters, rectum, nerves, and

vessels were most formidable. Perhaps, however, the most common and by no means the least serious complication is abortion. Contraction of the uterus being hindered the danger of hæmorrhage and the risks of septic poisoning are very great. Lefour[1] out of 307 cases has collected 39 cases of abortion, in 14 of which the mother died. Nauss[2] out of 241 cases noted abortion in 47. The question of treatment in these cases must be decided by the nature of the accident and the seat of the tumour. Subserous fibroids of the fundus probably will in no way interfere with parturition and these cases not infrequently disappear after parturition. In these cases then the surgeon may wait, but in cases of pelvic fibromata the dangers are very much greater, although cases have gone their full time, and patients been delivered either naturally or artificially. The expectant treatment must not be therefore carried too far or in the endeavour to save the child one may lose both mother and child.

Some fibroids of the cervix may be enucleated either before or during delivery. Duyan[3] removed one which weighed 650 grammes. Braxton Hicks[4] obtained enucleation immediately upon the application of the forceps and delivery was completed without difficulty. Maundé[5] recommends enucleation by the vagina whenever that is possible. Out of 16 cases which he relates the mother only succumbed twice and the majority of the children were born alive. In the case of interstitial fibroids with abdominal development the operation for their removal is so serious and the risks of primary abortion are so great that it becomes a very serious question with the surgeon what form of treatment to recommend. He must not, however, ignore the fact that induced abortion and induced premature labour themselves present serious danger. When the placenta is inserted at the region of the tumour alarming hæmorrhage will ensue owing to the inability of the uterus to contract, not only so, but the patient is exposed to far greater risks of septicæmia. Lefour in a series of 23 cases of induced labour noted 3 deaths. Tarnier out of 7 cases in which labour was normal saw the mother die in 1 case and the child in 3. Out of 6 cases which were delivered by forceps 4 mothers and 4 children died. In 6 cases where version was performed 3 mothers and 3 children died. Süsserot out of 147 cases of pregnancy complicated by fibroma which he has collected says that the forceps were applied in 20 with the result that 8 mothers and 13 children succumbed; version was performed in 20 cases, when 12 mothers and 17 children died; in 21 cases the placenta was artificially extruded and in 13 of these the mothers died. Collectively the mortality of the mothers was 53 per cent., that of the children 66 per cent. Lastly, as Pozzi has pointed out, abortion liberates the compressed organs only to a very slight extent, and if the surgeon is afterwards obliged to resort to hysterectomy he has put himself in the position of having exposed the life of the patient twice instead of once. For these reasons it is manifest that the surgeon should decide upon early interference and when comparing the mortality after pan-hysterectomy or subperitoneal hysterectomy with those of induced abortion or premature labour the statistics are so much in favour of the former form of treatment that I consider the surgeon should not hesitate to recommend hysterectomy in all those cases in which the symptoms are such that surgical interference is imperatively indicated.

Brook-street, Grosvenor-square, W.

[1] Lefour: Uterine Fibroma in Relation to Pregnancy, Paris, 1880.
[2] Nauss: Inaugural Dissertation, Halle, 1882.
[3] Duyan: Bulletin de l'Académie de Médecine, vol. xvi., p. 591.
[4] Braxton Hicks: Transactions of the Obstetrical Society of London, 1870, vol. xii., p. 272.
[5] Maundé: American Journal of the Medical Sciences, 1884, vol. i., p. 423.

BRISTOL ROYAL INFIRMARY.—The Greig Smith Memorial operation theatre of the Bristol Royal Infirmary will be opened by Sir William Mac Cormac, the President of the Royal College of Surgeons of England, on Friday, Sept. 30th.

NEW LUNATIC ASYLUM.—At a special meeting of the Breconshire County Council held on Sept. 16th it was decided to erect a joint asylum for Breconshire and Radnorshire. The council resolved that the asylum should accommodate 350 patients, with administration for 500.

A PROTEST AGAINST THE PRESENT DAY TEACHING OF APPLYING THE BLADES OF THE OBSTETRIC FORCEPS WITH EXCLUSIVE REFERENCE TO THE TRANSVERSE DIAMETER OF THE MATERNAL PELVIS.

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As the report in THE LANCET[1] of my remarks in the discussion on "The Use and Abuse of the Midwifery Forceps" at the recent meeting of the British Medical Association in Edinburgh requires a little elucidation, and as the matter I referred to there is, in my opinion, of some importance, I desire to supplement what I said by the following paper. I there, as I do now, took exception to the general teaching of the present day in this country that, so long as the blades of the forceps are applied transversely as regards the maternal pelvis it does not matter, or at least it need not be considered, how they are disposed as regards the head of the child. This is a departure (a Continental importation) from the older teaching of obstetricians in this country, who from Smellie's time until quite recently laid great stress upon the importance of applying the blades, both of the straight and double-curved forceps, with a due consideration not only of the pelvis, but also of the diameters of the fœtal head. The present day teaching is without doubt largely due to the writings of Dr. Barnes, who in his "Lectures on Obstetric Operations"[2] maintains that while with the straight forceps "the head determines the manner of applying it," continues, "but with the long forceps it is the pelvis that rules the application. The position of the head may be practically disregarded." We, of course, are only concerned here with the double-curved forceps.

Writing on the application of the forceps, Dr. Playfair and Dr. Galabin, in their respective text-books on midwifery, express themselves as follows. I quote from them because their text-books are the two most popular in the various medical schools of this country. Dr. Playfair writes:[3] "It is admitted that in the high forceps operation the blades must be introduced in the transverse diameter of the pelvis without relation to the position of the head."

Dr. Galabin writes:[4] "Accordingly it is now the usual plan, even if straight forceps are used, not to pay much regard to the position of the head, but apply the blades one at each side of the pelvis." "In the case of the long curved forceps it is generally taught that the blades should be applied at the sides of the pelvis without regard to the position of the head. The position of the head should, however, be exactly determined in the first instance, not so much that any great difference in the position of the blades should be aimed at in consequence, but rather that," &c.

It may be taken, then, from these quotations that the general teaching and practice in this country in applying forceps is to consider only the pelvis of the mother and to apply the blades always in the transverse diameter. Now, I consider such teaching unwise and incorrect. It is unwise because it tends to encourage carelessness from its lack of exactness. In applying the blades of the forceps both the child's head and the pelvis of the mother should be considered, and when an operator commences to exert traction not only should he know how the blades are lying with regard to the maternal pelvis, but also how they are lying with regard to the head of the child. It is also incorrect.

Dr Playfair says,[5] speaking in vindication of the teaching of applying the blades of the forceps always in the transverse diameter of the maternal pelvis, that he agrees with Dr. Barnes, who points out that "do what we will and attempt

[1] THE LANCET, August 6th, 1898.
[2] Lectures on Obstetric Observations, by Dr. Robert Barnes, fourth edition.
[3] The Science and Practice of Midwifery, by Dr. L. S. Playfair, eighth edition, p. 201.
[4] A Manual of Midwifery, by Dr. A. L. Galabin, fourth edition, p. 623.
[5] Op. cit., vol. ii., p. 202.

as we may to pass the blades in relation to the child's head they find their way to the sides of the pelvis." I presume Dr. Playfair means by "sides of the pelvis" the "transverse diameter" of the pelvis, for otherwise there is no sense in the sentence, seeing that the blades can only lie one to one side and the other to the other side. But such a statement as the above—and please observe it is a very generally expressed one—is, if one only thinks of it for a moment, tantamount to saying that the forceps is an instrument over which we have not complete control; that one operator will grasp the head as well as another; that all the operator has got to do is to introduce one blade to one side and the other to the other side of the pelvis, when the blades pass beyond his control and adjust themselves to the fœtal head in the best direction possible. But further proof of the incorrectness of the statement and general teaching will be found clinically. It will, I think, be admitted by all who have had much experience in obstetric practice that a head which was causing very great difficulty in extraction may sometimes be easily delivered by altering the grasp of the forceps. Now that is not because with the previous grasp the operator was exerting traction in a wrong direction, for before readjusting the instrument every operator would make attempts at traction in every possible direction. Neither is it because, on the first occasion, the blades of the forceps were not applied in the transverse diameter of the pelvis. The reason is simply that certain grasps of the head are better than others. In each case there is one grasp better and safer for mother and child than all others. The better grasp, however, is not likely to be secured by applying the blades of the forceps to the sides of the pelvis, and trusting to the chance of their adapting themselves to the most favourable diameter of the head. Much more likely is it to be obtained by applying the blades in a certain diameter of the child's head, which after due consideration of the case the operator believes to be the best.

Now a word or two with regard to the application of the forceps at the outlet, at the brim, and in flat pelves.

1. *At the outlet.*—Here, the long axis of the head having rotated into the conjugate diameter of the pelvis, the blades can as easily be applied with reference to the diameters of the fœtal head as with reference to the diameters of the maternal pelvis. When straight forceps were in use for this operation they were always applied with reference to the child's head and Dr. Barnes still recommends that method of applying them, as may be seen from the quotation I have already given.

2. *At the brim.*—Here, in spite of all one's efforts, it is nearly always impossible to grasp the fœtal head bi-parietally. The grasp must be more or less oblique in most cases. What I maintain, however, is that by considering the fœtal head and applying the blades deliberately to it as nearly as possible in the bi-parietal diameter a less oblique grasp is obtained one which will less often slip and one which will require less frequently to be altered than if the blades as recommended are simply introduced into the transverse diameter of the pelvis, traction exerted, and the grasp of the head never considered.

3. *In flat pelves.*—In such cases it is of the very highest importance that the fœtal head be deliberately grasped. In flat pelves, when the long axis of the fœtal head lies very nearly in the transverse diameter of the pelvis, the application of the blades of the forceps in the transverse diameter of the pelvis without reference to the head results in one of the three following grasps: (*a*) the head is grasped directly in the antero-posterior diameter—a very rare occurrence; (*b*) it is grasped very nearly but not quite in the antero-posterior diameter, also a rare occurrence; in such cases there is often the mark of the tip of one blade just above the eye; and (*c*) the head is grasped quite obliquely, one blade is to the side of the occiput and the other blade to the side of the forehead. This is by far the most usual grasp obtained.

What I maintain here is that if one applies the blades of the forceps, as is now generally taught, one cannot tell which of the above three grasps of the head one will get; it is entirely a matter of chance as far as the operator is concerned. Surely there is something wrong in a teaching into which the element of chance enters, especially when it is quite unnecessary that it should do so. To avoid it the operator has simply first to satisfy himself as to whether in a particular case it is better to grasp the head antero-posteriorly or obliquely and then deliberately to apply the blades to the child's head in the one or the other direction. That deliberate grasping of the child's head was the general teaching of obstetricians up till thirty years ago, only they, of course, approved only of the "oblique grasp," as they considered the antero-posterior one very dangerous to the child. Into the question of which of the two "grasps" is the better I will not enter at present. I would only say that in certain cases the one, and in certain cases the other, appears to me the safer for child and mother, and that the indications for the one or other will be found in the variety of flat pelvis one is dealing with.

In conclusion, I would only add that although the teaching I have been here condemning is very very general, I know it is not universal. Dr. Milne Murray, in his most able paper at the annual meeting of the British Medical Association the other day, referred to the matter and advocated a deliberate grasp of the head in flat pelvis, and other teachers in Edinburgh and elsewhere I am glad do the same.

Glasgow.

REMOVAL OF THE TRANSPARENT LENS FROM THE EYE IN HIGH DEGREES OF MYOPIA.

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THE true practical aspect of the operation of removal of the transparent lens for high degrees of myopia is apt to be somewhat lost sight of. On fully considering the question few surgeons can deny that in theory the above method of treatment is most excellent and should be adaptable with almost scientific exactitude—i.e., beyond a certain degree of myopic error removal of the lens from the eye by operation must be advocated in lieu of the more ordinary treatment by correction with spectacles. The much discussed point as to whether the operation tends to give rise to detachment of the retina or otherwise should for the moment be placed on one side and the question of lens extraction in high myopia be regarded from altogether a wider and more vital aspect. It is impossible to perform the operation of removal of the lens without in a certain degree violently disturbing the normal tranquillity of parts, the involved area comprising the ciliary zone and adjoining portions of the uveal tract, a region which, it is well known, is peculiarly liable to exhibit inflammatory resentment towards any extraneous interference. There are surely few ophthalmic surgeons who have not at some time encountered cases in which after extraction of a cataractous lens the eye has "gone wrong," either immediately after operation or later, without any apparent cause and in spite of every apparently possible precaution having been taken to avoid such a calamity. A myopic person and one with cataractous lenses cannot for one momen be classed in the same category. The latter is to all intents and purposes completely blind and has everything to gain by operative interference and nothing to lose should it prove unsuccessful, as he remains in very much the same plight as before. A myope, on the contrary, unless the case is one of malignant type, is a person who can generally obtain a reasonable amount of fairly accurate vision by the use of suitable spectacles, and who, if the operation proved only a partial failure, would be a considerable loser as regards vision, besides the possibility of noticeable eye deformity. In view of the inflammatory risks with their far-reaching consequences which the myopic patient would have to incur, quite apart from the possibility of the occurrence of retinal detachment, &c., the surgeon in the present state of our knowledge should wholly abstain from recommending the operation of removal of the lens in cases of high myopia. The method of treatment in question is one which is avowedly sound in theory and also quite feasible in practice, but it is absolutely imperative that it should be entirely regarded from the patient's point of view, and consequently should be placed in abeyance until the operation for the extraction of the lens from the eye by whatever method has been resolved into one which is entirely free from all risk of the onset of any after inflammation.

This accident is unfortunately not nearly so rare as one would wish, a fact which may be easily ascertained by reference to thoroughly complete and detailed lists of any moderately long series of cataract operation cases.

Cairo, Egypt.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

A CASE OF GLANDERS; NECROPSY.

(Under the care of Dr. SHARKEY.)

GLANDERS is fortunately a fairly rare disease in the human subject, but it is probably not quite so rare as it is usually thought to be. The resemblance between the ulcer resulting from a broken-down farcy button and that caused by a gumma is very great, and as in the following case the ulcerations in glanders are very often thought at first to be syphilitic in origin. As gummatous ulcers are very much the more common it is only natural that the mistake in diagnosis should occur; but should the ulcer withstand energetic anti-syphilitic treatment a bacteriological examination may possibly prove of value. If the diagnosis of the superficial manifestations of glanders is far from easy, still more difficult is it to recognise its presence early when the disease attacks only or chiefly the internal organs. Some cases show many points of resemblance to enteric fever and in many the symptoms closely simulate those resulting from tubercle. No certain diagnosis can be made without a bacteriological examination and cultures, but these are so trustworthy and definite that the presence of glanders may sometimes be settled in a very short time. For the notes of the case we are indebted to Mr. H. H. Scott, house physician.

The patient, a man, aged thirty-two years, was admitted to the hospital on July 5th, 1898. There was nothing of importance in the family history; no tubercle or syphilis. With regard to the previous history, three months before admission the patient had suffered from what he called rheumatism, the symptoms being pain of a sharp, stabbing character, starting in the abdomen and shooting down the right thigh to the calf; the calf at the same time became swollen. The attacks of pain came on suddenly at intervals of from 10 to 15 minutes. He found that he obtained most relief by merely supporting the leg on pillows. He consulted a medical man, who gave him some medicine to take; this was followed by subsidence of the swelling in the calf; he also applied poultices and lotions to the abdomen at the seat of pain. He was laid up altogether for 24 days. On Feb. 17th last he attended the out-patient department of St. Thomas's Hospital and received treatment there for a period of six weeks. On referring to his out-patient's letter Mr. Scott found that his complaint was entered as periostitis of the right tibia, ? syphilitic. It considerably improved on iodide of potassium, but a month later (while still taking the iodide) there was the entry: "Sore on arm, ? gummatous"; he was treated with chlorinated soda lotion locally and the iodide of potassium was pushed to 20 grains three times daily; improvement resulted and the patient ceased to attend six weeks after his first appearance. In his work he had charge of one horse only and that was, he stated, perfectly healthy. For three months before admission he had been losing weight—he thought about 2 st. On June 21st, 1898—that is, 14 days before admission—the patient was troubled with pain in the right side of the chest and abdomen, this time of a heavy, aching character, but, as in his former illness, shooting down the leg at intervals of about 10 minutes. He stated that he only passed a small quantity of urine during the day, but it was of normal colour; there was no deposit and he had never had any pain on micturition. On admission the patient was found to be a moderately well-nourished man, with face flushed and eyes bright, complaining of abdominal pain, mainly referred to the epigastrium and the adjacent part of the right hypochondriac region. The abdomen was not distended; it moved well on respiration; to percussion the note was resonant everywhere; but even light percussion caused evident pain under the right costal margin in the right lumbar and upper part of the right iliac regions. The abdomen was held more rigid in these situations; gurgling was noticed in the right iliac fossa, but nothing abnormal was detected on palpation. The heart and lungs were normal. The liver edge was felt one finger's breadth below the right costal margin. Splenic dulness extended from the eighth rib above in the left mid-axillary line to just below the costal margin; laterally, it extended to the anterior and posterior axillary lines. It could be easily felt descending on inspiration; no pain was caused by palpation in this region. No spots in any way suggestive of enteric fever were to be seen. The pulse was 100 per minute, regular and of fair tension; the respirations were 24. The urine was normal, of 1020 specific gravity. Just below the bend of the elbow on the outer side of the right arm was a sore on a reddish base an inch to an inch and a half in diameter, practically healed; the patient described it as being a sort of boil. Shortly after admission the patient passed a motion, almost liquid, dark yellow in colour, and appearing to contain undigested milk. The serum reaction of typhoid fever was tried with negative result, there being no clumping or loss of motility in half an hour with a dilution of 1 in 10. Diazo-reaction also did not give any characteristic result. The temperature rose to 102° F. in the evening, but in the morning it fell to 99·8°. The patient slept and took food well. Next day he complained of pain in the hepatic and splenic regions on palpation but none now in the right lumbar or iliac regions. Pain in the epigastrium still continued and was increased on taking food. The patient had up to July 12th been kept on milk and beef-tea, but on that date he began to complain of such low diet; he was given bread and butter, milk puddings, and two eggs daily. The idea that the case was one of enteric fever had been by this time almost given up. The temperature varied between 102° in the evening and 97·4° in the morning. By July 13th the pain had gone from the abdomen except in the splenic region. The abdomen all this time had been too rigid for a good examination to be made and it was suggested that the patient should be examined under an anæsthetic, but the temperature suddenly fell to normal and remained so for twelve hours. The patient seemed much better, so an anæsthetic was not given, the general opinion being that the case was merely one of fever without explained cause and that all was going to clear up. After this the intermittent type of temperature again appeared (varying between the limits of 103° and normal), but, in spite of this, the patient stated that he felt well and wished to get up. Four days later he was examined under an anæsthetic but nothing wrong could be detected in the abdomen. On July 25th he complained of an aching pain in the right calf and on the right tibia just above the malleolus. There was nothing to be seen at either situation nor did movement cause any pain, but the spots were very tender and painful to the touch. At the angle of the scapula over the right lung breath-sounds were feeble and on deep inspiration a few crepitations of small and medium size could be heard. The lungs had been repeatedly examined in order to see if there were any signs of tubercle to account for the temperature, but nothing had been detected until that day. The pain above the ankle becoming greater Mr. Clutton was asked to see the case and in his opinion the painful spot suggested a localised periostitis following enteric fever. Widal's reaction was consequently again tried but with the same negative result as on the former occasion. Fomentations always relieved the pain. He also now began to complain of pain over the right eye, increased by pressure, and the spot was very tender. On July 29th similar pain was complained of in the left eye, knee and ankle; there was ptosis of the left eyelid and pain in the right eye was increasing; the fundi were found to be normal. The right side of the face and the right temporal fossa began to swell and pain was caused on moving the jaw. On August 2nd a small pustule was noticed at the summit of the swelling; the left eye was kept closed, was painful and suffused. The evening temperature had been rising during the last week and for the past three days had remained

during daytime also almost uniformly up to 103°. On the 3rd the face was very much swollen. Small red nodules were noticed in the following situations: on the right arm at the junction of the upper and middle-third of the ulna, over the styloid process of the radius, and on the left arm near the middle of the biceps muscle. All were very painful; the first two were of the size of a sixpence and the third was as large as a florin. The patient had been delirious in the evening for the last two days and was bathed in perspiration at varying intervals. On the 5th the three nodules mentioned were pustular and many more pustules with inflamed red bases had appeared (following small red raised nodules as before) all over the face and legs. They did not now, however, cause any pain; in fact, on this morning the patient lay in bed and read a newspaper. There was this day some yellowish, offensive, watery discharge from the nostrils. Towards afternoon he began to run rapidly downhill. He became very drowsy, the pulse was rapid and feeble, delirium was low and muttering with louder outbursts at intervals, and he could not be roused to reply to questions. Several pustules appeared yesterday over the swelling in the right temporal fossa and some of these had now run together forming an irregular shaped ulcer. The ulcers extended through the skin and subcutaneous tissue and had very defined edges, giving the appearance of having been punched out; they were somewhat suggestive of vaccination marks which had become purulent on an inflamed, swollen base, or of small-pox pustules except that they were not umbilicated. Elsewhere the pustules remained discrete. Over the soft palate and the nasal septum some half-dozen similar pustules were present. The patient sank rapidly and without again recovering consciousness. He died at 4.30 A.M. on August 6th.

Necropsy.—At the post-mortem examination several of the nodules mentioned were found to be in the skin, others were subcutaneous, and others were still deeper in the muscular tissue. The maxillary lymphatic glands were enlarged and slightly also the submaxillary glands. There were a few shallow ulcers in the stomach; the edges were not indurated. Studded over the lungs and close beneath the pleura were numerous nodules of about the size of a split pea or a little larger, greyish-white in colour; a few of them were soft and caseous, but mostly hard. The lung tissue itself seemed normal. The heart was normal. The spleen was large, but nothing abnormal was found in it. The liver, kidneys, and intestines (except the stomach) were normal. A culture was taken before death from one of the pustules on the swelling in the right temporal fossa. The growth on potato and the microscopical appearance of the bacillus were pronounced by Mr. Shattock to be characteristic of bacillus mallei. It was practically a pure culture. Pus taken post mortem from an intra-muscular abscess showed results equally typical.

Remarks by Mr. SCOTT.—As regards the treatment of the case nothing seemed in any way to affect the course of the disease. On admission the patient was given quininæ sulphas 1 gr., mistura potassæ citratis effervescens 1½ oz. three times a day. On July 20th, with a view to more effectually controlling the temperature, 5 gr. of quinine were given twice daily. This was equally without result, so on July 30th he was prescribed liquor hydrargyri perchloridi 1 drachm, potassii iodidum 10 gr., infusum gentianæ compositum to 1 oz. three times a day, again without effect. The difficulty in the case from the first was in the matter of diagnosis. The enlarged spleen, general malaise, and a moderately high temperature suggested enteric fever, but the result of the serum test was negative. As the case went on this idea was given up, for the temperature was very unlike typhoid fever at the beginning of the third week. The bowels were opened as a rule once daily and the stools after the first two or three days were normal. There was nothing in the history to point to any definite disease. On July 12th, as stated in the notes, the temperature fell and it was thought that all might go on well and the cause never be discovered. The improvement, however, only lasted a very short time, when the tender spot over the tibia appeared. The view that the case might turn out to be an anomalous form of typhoid fever now had to be again entertained, Mr. Clutton stating that the lesion suggested a post-enteric periostitis. Serum reaction, however, again negatived that view. A few days later the remittent form of temperature was strongly suggestive of pyæmia from some cause, but nothing could be discovered on close examination into his history or on physical examination. When on August 3rd the small, red, raised nodules later becoming pustular and the offensive nasal discharge appeared the idea that the case was one of glanders began to come to the front and a culture was accordingly taken which subsequently, but too late for anything to be undertaken in the way of treatment, proved to be an almost pure culture of bacillus mallei both microscopically and by the characteristic yellowish honey-like mass on potato becoming of a brownish chocolate colour. From consideration of evidence the case should probably not be looked upon as one of acute glanders, or more strictly subacute, with an exacerbation towards the end and running its course in from six to seven weeks, but as a chronic one lasting from four to five months, and in support of this view is the fact that the lymphatic glands of the arm and the submaxillary glands also were enlarged and hard, and again the lungs showed well-marked farcy nodules which in some instances could be shelled out from their bed of lung tissue beneath. Then probably the "sore on the arm," mentioned as occurring in March last while the patient was attending the out-patient department, was a chronic farcy lesion, although it certainly improved to some extent on administration of potassium iodide, or the improvement may have resulted from the local use of chlorinated soda lotion.

CUMBERLAND INFIRMARY.

A CASE OF SUPPURATIVE PERIOSTITIS OF THE NECK OF THE FEMUR WITH ACUTE PYÆMIA.

(Under the care of Mr. LEDIARD.)

FOR the notes of the case we are indebted to Dr. Stuart McDonald, house surgeon.

The patient, a boy, aged sixteen years, was admitted to the infirmary on August 8th, 1898, with the following history. Seven days before, while in the train on an excursion, he was seized with acute pain in the left groin. The pain was so severe that he could not walk about and on his return he had to be assisted home by friends. He was in perfect health in the morning and there had been no recent injury. On the following two days, the pain persisting, he kept in the house but was not confined to bed; the pain was relieved by turpentine and hot cloths. He felt hot and feverish at times, and on the Wednesday night, the third day from the beginning of his illness, he had a shiver and sweated profusely; he was also delirious that night. On the following afternoon he walked out and consulted a medical man in town, who found that he was suffering from severe pain in the upper part of the left thigh, which was slightly swollen; there was localised tenderness on pressure, below the middle of Poupart's ligament. There was no pain on "jarring" the hip-joint and no pain in any other part of the body. The boy walked very lame and only with assistance. His temperature was 102° F. He was sent home to bed and given anti-rheumatic remedies with hot poultices locally. On Friday and Saturday the symptoms continued, the temperature ranging between 101° and 103° and the swelling extending down the thigh. On the Sunday he complained for the first time of pain in his other joints, especially the right wrist, which was slightly swollen. On Monday there was dulness at the base of the right lung with friction. There was a trace of albumin in the urine. He was removed to the hospital in the afternoon. With regard to his personal and family history, the patient's mother was phthisical; the rest of the family were healthy, but the boy had always been delicate; he had only been laid up once, however—viz., with inflammation of the left lung seven years before. Six months ago he had been knocked down at football and had received a kick on the left hip. He was not laid up with this, but his father stated that he had seen him lately walking with his hand over the left hip. The boy himself did not complain. On admission the patient looked very ill. His temperature was 102°, his pulse was 125, and his respirations were 30. He could answer some questions but could not sustain attention. The tongue was dry and brown, the lips and teeth were covered with sordes, the bowels had not been moved for two days. As to the local condition, there was well-marked swelling of the whole of the left thigh, most marked in the upper part, where there was hard inflammatory œdema extending from below Poupart's ligament up into the left iliac fossa and out over the great trochanter and immediately above it over the ilium. There was a distinct dark blush

over this latter region and distension of veins over the upper and outer aspect of the thigh. There was acute tenderness over a small area below the middle of Poupart's ligament and also over the area of blush. There was no fluctuation to be made out anywhere. The right wrist was slightly swollen, but there was no redness. No other joint was affected. There was dulness at the base of the right lung with occasional harsh friction. The first sound was almost inaudible; there was no bruit or friction. There was a trace of albumin in the urine, the specific gravity of which was 1018. The patient was given two drachms of whisky hourly; he was very thirsty and took milk and soda freely. Mr. Lediard operated the night of admission about 8 o'clock. The temperature had then risen to 104°. An incision was made over the most prominent part of the swelling behind—viz., over the great trochanter and immediately above it. The incision extended down to the bone; the tissues, especially the edge of the fascia, presented an unhealthy gelatinous appearance. About half an ounce of rather watery pus was evacuated; it seemed to come from deep down just above the trochanter. Some seemed to come also from along the ilium, but the tissues were separated from the bone down to the margin of the sacro-sciatic notch, and no more was discovered. The wound was stuffed with iodoform gauze. The pus evacuated contained numerous micrococci, mostly in the form of diplococci, but there were also typical staphylococci. The patient stood the operation very well. Two hours afterwards the temperature had fallen to 102·5°, the pulse was 125, and the general condition remained unchanged. At 1.30 A.M. there was considerable oozing from the wound, which was dressed and more pressure applied; the patient was very restless, sweating profusely, and was very thirsty. The temperature was 103°, the pulse was 135, and the respirations were 35. On August 9th, at 9 A.M., the patient looked worse: the respirations were 42; the pulse was 140 and very weak; and the temperature had risen to 104°, with noisy delirium. 10 c.c. of anti-streptococcic serum were given. At noon the temperature had risen to 106°, and just before death, which took place at 3 P.M., it reached 108°.

Post-mortem appearances.—The incision in the thigh was prolonged up and down; the periosteum of the shaft was healthy. The periosteum of the neck of the femur was found to be thickened and dissected off the bone with pus all the way round. There were about two drachms of pus in the hip-joint and the head of the femur and lining of the acetabulum were of a bright pink colour; the interior of the head and neck of the bone and epiphyseal cartilage were apparently healthy. The right wrist-joint was opened and found to be apparently healthy. With regard to the lungs there was recent pleurisy over the lower and lateral aspect of the right lung and there were extensive old adhesions over the lower lobe on the left side. Both lungs were acutely congested. As to the heart, there were two minute patches of recently effused lymph on the surface of the right ventricle near the apex. There were no vegetations on the valves and the organ looked otherwise healthy. Both kidneys were congested and showed cloudy swelling. There was a small group of miliary abscesses deep in the cortex of the left kidney. The spleen was much enlarged, very soft and friable. A small superficial abscess containing about ten drops of pus was discovered in the scalp behind the right ear. Films were prepared from the pus from below the periosteum, from the hip-joint, from the pyæmic abscesses in the kidney, and from the scalp abscess. These all showed similar organisms—viz., micrococci, many diplococci and typical staphylococcal groups; there were no streptococci and no bacilli. Films from a scraping from the spleen and from blood from the interior of the heart showed similar forms, but in that from the blood in addition were numerous large bacilli like bacillus subtilis in appearance, probably post mortem putrefactive forms.

Remarks by Dr. MCDONALD.—It would be difficult to say what chances, if any, this patient would have had from early operation, the small amount of pus formed locally and the intensity of the general symptoms pointing to a very virulent type of staphylococcus. The relationship of the old injury of the hip to the illness is by no means clear and the significance of the scalp abscess is also doubtful. An eminent pathologist who examined the preparations was of opinion that it certainly had no causal connexion. With regard to the serum used the absence of streptococci from the first pus evacuated seemed to contra-indicate its use, but as the patient was rapidly getting worse the next morning it was decided to try it. It is impossible to say how much of the hyperpyrexia was due to its use, but it certainly seemed to hasten the end.

Reviews and Notices of Books.

Outlines of Medical Jurisprudence for India. By J. D. B. GRIBBLE, M.C.S. (retired), and PATRICK HEHIR, M.D., F.R.S. Edin., &c. Fourth edition, revised and corrected. Edited by Surgeon-Major PATRICK HEHIR. Madras: Higginbotham and Co. Calcutta: Thacker, Spink, and Co. Bombay: Thacker and Co. 1898. Pp. 498.

THE fact that this work has reached the fourth edition is proof that it supplies a want. One especial merit about the book is that it is equally suitable for members of the medical and the legal professions. All technical expressions are explained in footnotes, so that a barrister consulting it would be able to understand the purely medical details. The whole book is arranged in numbered paragraphs, so as to be easy of reference.

With the exception of minor changes, including that of correction and revision, no noteworthy modification has been made in this edition, and its publication was delayed owing to the editor being on duty with the Tirah Expedition. The text contains a large number of illustrative cases, the majority of them culled from Indian experiences, so that they are new to English readers; several well-known examples, however, are copied from the English text-books.

The chapter on Evidence in India is particularly interesting. It would seem from this work that the great difficulty with which all magisterial and judicial officers in India have to contend is the false evidence which daily comes before them. The editor thinks that it is no exaggeration to say that a case scarcely ever comes before a criminal court in which there is not a certain amount of false or concocted evidence. The duty of a judge or magistrate in India is, generally speaking, not so much to decide which story is the true one and which is the false one, but to separate the falsehood and the truth on both sides, and, having eliminated the former, to decide upon the case. The legal maxim, *falsum in uno, falsum in omnibus*, does not apparently apply in that country. In England the discovery that some evidence for the prosecution had clearly been concocted would probably be quite sufficient to ensure the release of the accused; but if such a rule were to be followed in India the author is of opinion that there would scarcely ever be a conviction.

The book is well printed and, owing to the marginal notes on nearly every page, very easy of reference for barristers and medical men.

Laboratory Work in Physiological Chemistry. By FREDERICK G. NOVY, Sc.D., M.D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. Second Edition. Revised and Enlarged. Ann Arbor, Michigan: George Warr, Publisher. 1898. Price $2.

THE system of orthography adopted by so many scientific American writers is apparently ignored in this volume except in regard to a few everyday words such as "color" and "behavior." But we do not find the final "e" lopped off such words as oxide, chlorine, urine, as is so conspicuously the case in many American text-books of science. The work before us is essentially a laboratory companion, and calculated to train the student in the right way, that is to develop his capacity of observing and reasoning. The plan adopted is clear and simple and for an experimental course the best. Thus the chemistry and physiology of food stuffs, of the animal fluids and secretions, is first presented, and then succeed short paragraphs describing the reactions characteristic of the substance under study. When it is a factor

of pathological importance processes are also given for the quantitative determination of certain constituents, as, for example, uric acid in urine, hæmoglobin in blood, and so on. We have often pointed out that the original test devised by Pettenkofer for biliary acids is not satisfactory when, as is enjoined in the volume before us, cane sugar is employed; it is much better to substitute glucose which does not char and mask the violet colouration. The tintometer of Lovibond has evidently not come into use in America in its application to "hæmoglobinimetry," for we do not find this ingenious and useful apparatus described in the chapter (VIII.) on blood. The author recommends the bibulous paper method for estimating the fat in milk. This method, it is true, is very accurate, but there are other methods equally accurate and certainly much less laborious, as for example the Werner Schmid method, or the Leffman Beam centrifugal process, which by the way had its origin in the United States. In the now well-known Kjeldahl process for the estimation of organic nitrogen the addition of permanganate to the hot acid fluid is suggested. Investigators in this country have found that this leads to a loss of nitrogen, and consequently the modification has been abandoned, and when potassium sulphate and a pellet of mercury are employed it is not necessary in order to make the digestion and change to a colourless fluid complete. The book concludes with an excellent scheme for the the examination of urine, and some microscopical illustrations of urinary sediments.

Conservative Gynæcology and Electro-Therapeutics. By G. BELTON MASSEY, M.D. Third edition. Illustrated. Pp. 390. 1898. Philadelphia: The F. A. Davis Co.

IT is quite certain that electricity judiciously used is capable of giving good results in certain classes of gynæcological cases, and the numerous observations of Apostoli, Keith, and others show that it has in many cases a very definite effect upon the growth of fibroid tumours of the uterus. It is of great importance, if this method of treatment be used at all, that it should be used in properly selected cases, and with a due knowledge of what may be expected from it, and how the best results are to be obtained. There can be little doubt but that the disappointments and failures that have occurred are due to the want of a proper knowledge of the best methods to be employed, and to an absence of that technical knowledge which is so indispensable if really trustworthy results are to be obtained. In his book upon Conservative Gynæcology and Electro-Therapeutics Dr. Massey, who is an ardent advocate of electrical treatment in gynæcology, gives a clear account of the subject and shows what may be done by this method of treatment. The book consists of two parts. The first part contains, amongst others, chapters upon the Phenomena attending the Transmission of Galvanic Currents through Living Bodies, the Typical Methods of applying Electric Currents in the Diseases of Women, and an account of the various affections in which the author recommends their use. It is clearly in the selection of cases suitable for this treatment that great differences of opinion may arise. No doubt all would admit that cases of endometritis, chronic metritis, fibromata of the uterus, and inflammatory exudations in the pelvis, are likely to be benefited by the treatment. In cases of early ectopic gestation, however, most gynæcologists would prefer to rely upon operative treatment, and yet the results brought forward by the author tend to show that electrical treatment in such cases may be followed by good results and is seldom productive of any harm. The use of the faradaic current is recommended in labour in cases of inertia uteri and for post-partum hæmorrhage, for which Dr. Massey says "there is nothing equal in immediate results to the primary faradaic current applied with a bipolar electrode within the uterus, or a single active pole in that situation and the other on the abdomen." Here most obstetricians would be inclined to join issue with him and to continue to rely upon the tried and known effects of an intrauterine injection of hot water. Still, if the necessary apparatus were at hand, no doubt good results could be obtained with the faradaic current.

The second part of the book contains a clear account of the rudiments of medical electricity, and there are two appendices, one containing a table of 86 cases of fibromata of the uterus with details of treatment and ultimate results, and the second a table of 34 cases of catarrhal disease of the uterus under electric treatment.

Lehrbuch der Anorganischen Chemie. Von Professor H. ERDMANN in Halle. Mit 276 Abbildungen und 4 farbigen Tafeln. Braunschweig: Druck und Verlag von Friedrich Vieweg und Sohn. 1898. (Manual of Inorganic Chemistry. By Professor H. Erdmann. With 276 Illustrations and 4 Coloured Plates.) Price 18 marks.

THERE is considerable difference of opinion amongst English teachers of chemistry as to whether the purely mathematical portion of the science should be presented to the student before he has made a few experiments, before he has handled a test-tube, blowpipe or reagent, or, in other words, before he has got a glimpse of the nature of chemical change. If the student is an absolute stranger to the elements of the science there can be no question as to the way in which he should start. The volume before us is therefore adapted for those students who already possess some knowledge of chemistry such as now may be gained at our schools, since the author with startling suddenness opens boldly with the consideration of the theoretical side of the science in a chapter on decimal fractions and the use and value of logarithms. This section amounts, indeed, to a plea for the more general employment of logarithms in calculation, and a loose sheet of logarithms useful in chemical calculations is placed under a band on the inside of one of the covers. Next we come to theory and law, atomic and molecular weights, and the methods for their determination, the first chapter closing with valency and affinity. The second chapter, which we should ask the beginner to study first, is devoted to what the author calls "the metalloids," under which heading he includes the ordinary non-metallic elements, and under the same classification selenium, tellurium, arsenic, antimony, silica, and germanium. Under the class entitled "*edelgase*" (rare gases) occurs an excellent section on argon and helion. The apparatus used in the preparation and separation of these gases is fully illustrated, and an admirably coloured map of the spectra of gases includes the brilliantly characteristic lines of these newly discovered elements. For the rest, the plan of the book is much on the same lines as English text-books, the classification adopted being already indicated, the elements being divided into metalloids and metals (*Metalloide und Metalle*). We are glad to find that an acknowledgement is made of the work of the English chemist, Mr. J. A. R. Newlands (whose death, we regret to add, was announced a short while ago), in connexion with the discovery of the periodic law afterwards so ingeniously elaborated by Mendelèeff, the illustrious Russian chemist. The book will be very useful as an introductory manual for students taking the more purely technical sides of the science, since the description of technical processes, of metallurgical processes, of the refinement of metals, and of the compression of gases is given in some detail, and, moreover, in accordance with modern advance, the preparation of aluminium from cryolite or clay is here included; indeed, the author has treated the subject

with a surprising completeness of detail and narrative considering the limits of space entailed in a "*lehrbuch*."

Responsible or Irresponsible? Criminal or Mentally Diseased? A Plea for the Unjustly Convicted, and on the Cause of Crime. By HENRY SMITH, M.D. Jena. London: Watts and Co. 1898. Pp. 92. Price 1*s*.

THE intention with which this little book is written is well expressed in the opening words of the preface. "I plead that our fellow-citizens who are of unsound mind shall not be treated as criminals; and that those who may have broken a law or committed a crime when in a morally unconscious state, the result of disease, shall not be convicted as insane or as criminals, but shall be treated as persons diseased, and neither consigned to a convict prison nor to a lunatic asylum, but to an asylum fitted for those who require medical attention."

Most people will probably agree with Dr. Henry Smith in the general sense of the above, but when details are discussed a number of difficulties will be found. In the first place the law does not define what insanity is; it is a matter of evidence, expert or otherwise, whether a person is insane or not, and therefore it is of the first importance that medical men should know what insanity is, and when a person is insane. Do they know? Are they agreed on this difficult question? Dr. Smith thinks not; and there is certainly great room for opinion. Another difficulty is that a medical man finds it by no means an easy matter to convince a patient that it is no more disgraceful to be sent to a home for the cure of dipsomania, delirum tremens, or mania, than to a hospital for the cure of fever or small-pox. Such patients naturally shrink from letting the world know the true diagnosis of their condition, but all the same it is universally admitted amongst medical men that some radical change in the laws relating to inebriety is required if practitioners are to do justice to their patients. Dr. Smith enters fully into this question and his remarks thereon are well worth perusal. He maintains that magistrates should have the power to commit drunkards to a home or asylum where they may be detained till cured of their desire for drink.

Another chapter which may be more noticed in legal circles than in medical is entitled "Equal Means must be given to all Men for their Defence." Here the author makes declarations with which we cannot agree. "I venture to say it is all but certain that he who can pay for a costly and learned defence will be discharged and the poor man who cannot pay will be convicted." We believe that such is by no means the case. If a prisoner is undefended by counsel the judge gives him every assistance in his power; if the charge is very serious a barrister is requested to undertake his defence.

This little volume is certainly worth reading and we trust that many of the reforms which its author suggests will eventually be carried out.

JOURNALS AND REVIEWS.

Annales de Gynécologie et d'Obstétrique. August, 1898. Paris: G. Steinheil.—Professor Pinard contributes a note to this number of the *Annales* upon Puériculture during Pregnancy, with special reference to the influence of the well-being of the mother upon the development of the fœtus. Professor Vautrin writes upon Gangrene of Interstitial Fibroids of the Uterus; and Dr. Meslay and Dr. Hyenne conclude their paper upon Degenerative Changes in Fibroid Tumours of the Uterus. Dr. Hartmann contributes an article upon Posterior Colpotomy in the treatment of Suppurating Appendages. Dr. Labusquière reviews recent papers by Dr. Grigorieff and Dr. Knauer upon the Transplantation of Ovaries and its results, and a paper by Dr. Karl Heil upon the Existence of a Physiological Slowing of the Pulse in the Puerperium. The treatment of Chronic Bartholinitis is considered by M. Cordier, who recommends the injection into the gland of a saturated alcoholic solution of salicylic acid. The rest of the number consists of the proceedings of the Society of Surgery and the Obstetrical and Gynæcological Society of Paris.

Revue de Gynécologie et de Chirurgie Abdominale. No. 4. July–August, 1898. Paris: Masson et Cie.—As usual this review contains several articles of great value. Tuffier writes upon Vaginal Hysterectomy without Forceps or Ligatures. He employs an instrument he calls an angiotribe with which he crushes the broad ligaments and so occludes the vessels. F. L. Neugebauer gives an interesting account of all the recorded cases—some 31—of utero-intestinal fistulæ with full details of the cases and a table. Two cases of abdominal hysterectomy for fibromata of the uterus complicated by pregnancy at full term are related by Eugène Gutierrez. Henrotin and Herzog describe 2 cases of extra-uterine gestation, the one occurring in the extremity of an accessory pavilion of the Fallopian tube, the other in a diverticulum. These are of great interest in connexion with early rupture of ectopic gestations. In an article upon the therapeutic value of ovarian extract Jayle concludes that it is often useful and recommends it in cases of removal of the ovaries, at the menopause, in amenorrhœa, dysmenorrhœa, chlorosis, and ovaritis. Ratchynsky, reviewing the various forms of suturing the abdominal wall after laparotomy, recommends deep sutures embracing all the structures, with separate suturing of the aponeurosis of the recti and superficial sutures for the skin. The number also contains a paper illustrated by cases upon lateral implantation of the intestine by Lauwers, and the usual analysis of current literature.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. F. R. WELDON, F.R.S. New Series, Vol. XLI., Part 2. June, 1898. London: J. & A. Churchill. Price 10*s*.—This part contains the following memoirs: 1. The Segmentation of the Ovum of the Sheep, with Observations on the Hypothesis of a Hypoblastic Origin for the Trophoblast, by Richard Assheton, M.A. With 4 plates. 2. On the Heart-body and Cœlomic Fluid of Certain Polychæta, by Lionel James Picton, M.A. With 4 plates. 3. On the Hypothesis that Lake Tanganyika Represents an Old Jurassic Sea, by J. E. S. Moore. With a plate. 4. On the Reno-pericardial Canals in Patella, by Edwin S. Goodrich, B.A. With a plate.

The Journal of Anatomy and Physiology. Conducted by Professor Sir WM. TURNER, Professor D. J. CUNNINGHAM, Professor A. MACALISTER, Professor J. G. MCKENDRICK, and Professor G. D. THANE. Vol. XXXII., Part 4. July, 1898. With Plates and Figures in the Text. London: Charles Griffin and Co. Price 6*s*.—This part contains the following articles: 1. Dr. W. G. Aitchison Robertson: The Salivary Digestion of Starch in Simple and Mixed Diets. This article is noticed in an annotation in our present issue. 2. Mr. J. Playfair McMurrich, M.A., Ph.D.: A Case of Crossed Dystopia of the Kidney with Fusion. 3. Mr. N. Bishop Harman: The Duodeno-jejunal Flexure, its Variations and their Significance. 4. Louis J. Mitchell, M.D.: Notes on a Series of Thirty-nine Cases of Meckel's Diverticulum. 5. Dr. Francis O. Simpson: Congenital Abnormalities of the Heart in the Insane. 6. Mr. A. E. Taylor: Note on a Case of Six Lumbar Vertebræ and Abnormal Middle Sacral Artery. 7. Dr. F. W. Eurich: Contributions to the Comparative Anatomy of the Neuroglia, with two plates. 8. Dr. R. Broom: On the Organ of Jacobson in the Hyrax, with a plate. 9. Dr. R. Broom: Is there a Critical Period in Marsupial Development? 10. Mr. F. G.

Parsons: The Muscles of Mammals, with special relation to Human Myology. 11. Mr. J. H. F. Wilgress of Selwyn College, Cambridge: A Note on Hereditary Stiffness of the Metacarpo-phalangeal Joint of the Thumb. 12. Dr. Edred Corner of Sidney Sussex College, Cambridge: On Some Skulls from Ceylon. 13. Professor Richard J. Anderson: Some Notes on the Manus of the Dugong. 14. Dr. Edward Fawcett: Some Points concerning the Mounting of Dissections in Basins. 15. Archæologia Anatomica. 16. Mr. R. J. McClelland (student): Note on a Moderator Band in the Left Ventricle and a Perforate Septum Ovale in the Heart of a Sheep. 17. Professor Bertram C. A. Windle: Eighth Report on Recent Teratological Literature. Lastly, there are notices of new books, a report on the Association of American Anatomists, and the index to Vol. XXXII. of the journal.

Medical Temperance Review.—The September number contains an abstract of a paper on Alcohol in Drugs and Drug Preparations read by Dr. Norman Kerr at the meeting of the British Medical Association. There is also an account of the proceedings at the annual medical temperance breakfast which took place in Edinburgh during the meeting of the Association. The speakers were Professor Simpson, Dr. ims Woodhead, Dr. Clouston, Dr. Ridge, Dr. Connel, and Mr. A. P. Young.

Liverpool Medico-Chirurgical Journal.—The original articles are on Colotomy (by Mr. F. T. Paul), on the Influence of Skin Condition on Surgical Procedure and on the Treatment of Eczema by Counter-irritation (by Mr. Colin Campbell), on Sewage Disposal (by Dr. H. R. Jones and Dr. Frank Robinson), on Foreign Bodies and the Use of the x Rays (by Mr. C. T. Holland), on Practical Gynæcology (by Dr. William Alexander), and on Cholecystitis as a Complication of Enteric Fever (by Dr. C. A. Hill). As usual the bulk of the journal consists of reports of the meetings of the Liverpool Medical Institution.

Mercy and Truth.—The numerous articles include an account of the Kashmir State Leper Hospital, by Dr. E. F. Neve. There is a full-page photo-print of a Chinese Opium Smoker.

In the *Phonographic Record* for September contributions by Sir W. R. Gowers on Syphilitic Disease of the Cerebral Arteries and by Mr. Peyton Beale on the Use of Alcohol as a Wound Dressing deserve attention. Sir W. R. Gowers says that as an indication of previous syphilis great reliance may be placed upon loss of the pupillary action to light, whilst the reaction of accommodation is not impaired. Mr. Beale, whose article we referred to last week, finds that alcohol applied as methylated spirit on double cyanide gauze promotes rapid union of wounds and checks serous exudation, so that the risk of the wound becoming infected after the first dressing is very slight. Dr. Atchley's Note on a Cancer Cure of the Eighteenth Century shows that vaunted specifics for cancer were known more than 100 years before the days of Mattei; and the concluding instalment of Dr. Fletcher Beach's Observations on Mentally Deficient Children is marked by many helpful suggestions on the psychology and treatment of these alien outcasts.

PLYMOUTH INFECTIOUS DISEASES HOSPITAL.—On Sept. 13th the Plymouth Board of Guardians received from their Visiting Committee a report which contained serious allegations as to the treatment of the workhouse children sent to the Borough Infectious Diseases Hospital. On Sept. 16th the hospital sub-committee of the town council held an inquiry into these allegations, with the result that all the charges against the hospital were emphatically denied. The affair had created a considerable amount of interest in the Three Towns and much more will probably be heard about the matter. It is certainly to be regretted that the guardians did not give the Sanitary Committee and hospital officials an opportunity of replying to the charges before they adopted the report.

New Inventions.

A THREE-WAY COCK FOR ADMINISTERING NITROUS OXIDE GAS AND ETHER; FOR USE WITH CLOVER'S INHALERS.

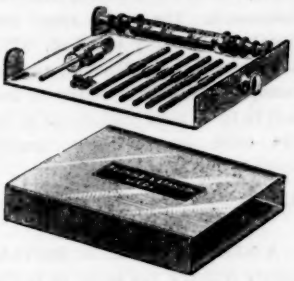
THIS device consists of a T-shaped tube with two telescoping tubes X and Y at either end of the horizontal limb.

A small ether bag is passed over the shoulder B. The gas enters by a tube T and is guided into the bag which it distends. The vertical limb I fits into a Clover or similar inhaler. With both Y and X pulled out the patient breathes air. Push Y in and the inspiratory and expiratory valves are brought into action. Push X in and they are thrown out of action and he breathes backwards and forwards into the bag. The movements are controlled by slot-pins and the letters opposite these indicate the action of the valves, thus for breathing Air the slot-pins will be at A and A G, for breathing Gas they will be at G E and A G, and for breathing Ether they will be at G E and E. The advantages claimed for the apparatus are that it is simple of construction, that it can be fitted to a Clover's inhaler, and that an ordinary small ether bag only is required, and ether anæsthesia can be continued without changing the bag. It has been used by myself and my colleagues at Wolverhampton General Hospital for more than a year with very satisfactory results. It is made by Mr. F. Ash of Birmingham.

J. A. CODD, M.D., B.Sc. Lond.,
Honorary Assistant Physician, General Hospital, Wolverhampton.

IMPROVED ASEPTIC HYPODERMIC SYRINGE AND CASE.

THE accompanying illustration shows a new form of aseptic all-metal hypodermic syringe and case. The advantages claimed for it are, that it can be easily sterilised, that it is durable, that it holds a number of tubes of compressed drugs, all the articles in the case are easily got out, and that, being compact, it can be carried in the waistcoat pocket very conveniently. It is manufactured by Messrs. Reynolds and Branson, of Leeds.



E. MILWYN JENKINS, M.B., C.M. Glasg.
Shaftesbury House, Calverley.

A NEW CATHETER DISH.

THE accompanying illustration shows a dish which I have designed for the reception of flexible catheters in daily use. It consists of an elongated narrow vessel, furnished with an overlapping lid, and it is sufficiently long to admit a catheter of ordinary length without flexion being necessary. The catheter rests on two transverse ridges attached to the bottom of the dish, so that the antiseptic solution with which the dish is filled surrounds the instrument. A flexible catheter, once having been used, has to be bent to be placed in most of the receptacles as used at present and this frequently produces "kinking" or injury at the eye. In my

dish the catheter can be kept perfectly straight and a minimum amount of solution is required to keep it submerged. The vessel being long and flat it may be kept by a patient's bedside without fear of upsetting it, and the shallow depth combined with the absence of angles renders the dish very easily cleansed and sterilised. A label may be attached

to the handle or the patient's name may be written directly in ink or pencil on the lid. The dishes will serve for all forms of flexible catheters or bougies and may also be used for drainage tubes. They are manufactured of iron, enamel ware, glass, or porcelain, and may be obtained from Messrs. Reynolds and Branson of Leeds at a small cost.

H. DE PAIVA B. VEALE, L.S.A. Lond.,
Late House Surgeon General Infirmary, Leeds.

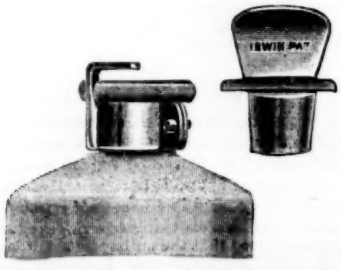
A MODIFIED UTERINE SOUND.

THE many dangers incidental to the use of the ordinary uterine sound, even in skilful hands, may, I think be avoided by the use of the instrument depicted in the illustration. The various manipulations for which the sound in its original form has been found so useful can be equally effected and without danger by its use in the modified form. During the operations for vaginal or abdominal hysterectomy it will be found useful for lifting the uterus or deflecting it to either side or carrying it to the front or back. The sound is constructed of flexible copper, plated, with the addition of a metal disc on which the os and cervix rest; this is placed two inches from the point, thus making it impossible to penetrate the fundus (the weight of the uterus being borne by the disc and not by the point), which was a serious fault of the original instrument. The entire sound being made of metal can be easily sterilised, while the handle being pear-shaped will afford additional power in manipulation (more especially in operation cases) and be found more comfortable to the hand than the older form. Messrs. Arnold and Sons, London, are the makers.

Cheltenham. ALEXANDER DUKE, F.R.C.P. Irel.

A NEW ANÆSTHETIC BOTTLE.

DR. FREDERIC HEWITT has asked us to draw the attention of our readers to a new and efficient bottle for ether, chloroform, and allied substances. It is the invention of



Mr. Irwin, of 4, Cottage-grove, Stockwell, S.W., from whom bottles of various sizes (6 oz., 12 oz., and 18 oz. capacity) may be obtained. The stoppers are made of a special alloy and each one is ground into the glass neck of its bottle, so that a very accurate fitting results. In placing the stopper in its bottle it has simply to be turned a little and the projecting metal rod shown on the left hand side of the stopper in the illustration wedges more and more tightly under the metal arm carried by the collar round the neck of the bottle. In this simple way perfect accuracy of fitting is secured and the stopper cannot be dislodged until it is released by turning it back. Dr. Hewitt has tried the system for three months and finds that it works well. Each bottle is supplied with a leather case, which has the advantage of being lighter than the wooden case generally used.

FIFTY-SECOND ANNUAL REPORT OF THE COMMISSIONERS IN LUNACY.

THE fifty-second annual report of the Commissioners in Lunacy provides the usual statistical review of the certified insane in England and Wales and a critical retrospect of the different institutions set apart for the care and treatment of those afflicted with mental disease. The total number of persons of unsound mind under the supervision of the Lunacy Commission on Jan. 1st, 1898, was 101,972, being an increase of 2607 over that of the previous year. Figures like these are warranted to arouse a feeling of anxiety in the public mind, and at first sight it would appear that the malady is tightening its grip upon the community. The statistics are no doubt disquieting, but if we accept the views of the Commissioners, set forth in the special report issued last year, as correct, the increase is more apparent than real. The Commissioners attributed the higher numbers to various causes, amongst others the increase in the general population, a gradually diminishing death-rate in the institutions under their control, and an enhanced tendency on the part of relatives and others to send senile cases to the asylums for treatment. These and certain other influences undoubtedly account in a large measure for the increase, but it is more than questionable whether they account for all. It would be well if the Commissioners could see their way to include in their statistical returns a table showing the number of first cases in which the insanity developed itself within three months before admission. There ought to be no difficulty in compiling such a table; it would unquestionably prove a surer means of gauging the actual rate of freshly occurring insanity than some of the theoretical methods so frequently employed. The table itself could not fail to be a valuable addition to the statistical returns presented from year to year, some of which, we regret to say, are absolutely useless and only serve to cumber the pages of the blue-book. The actual increase above notified is caused mainly by a large increment in the pauper class—viz., 2486. There were 124 more private patients and 3 fewer criminal lunatics. The ratio of registered insane to the population on Jan. 1st, 1898, amounted to 32·48 per 10,000, a differential increase of 0·48 on last year's ratio. According to the Commissioners' figures in the year 1859 1 person in 536 was insane, whereas this year it is computed that 1 person in 308 is of unsound mind.

The ratio per cent. of the pauper insane to paupers of all classes is perhaps the fairest test for determining the prevalence of insanity in the community, for the actual pauper population is known and the number of pauper insane within the cognisance of the Lunacy Board embraces, with but few exceptions, the total number of pauper insane in the country. The ratio of paupers to the population is fairly stationary, but there has been a gradually progressive rise in the ratio of pauper lunatics to paupers of all classes during the last decade. The ratio in 1889 was 9·25 per cent.; in 1898 it stands at 11·08 per cent. This represents an actual increase in the ratio of pauper lunatics to paupers of all classes of 1·83 per cent. during the two years, but, according to the official view, as before explained, the increase is mainly due to accumulation and to the gathering within the official net of numbers of the class described as "unregistered lunatics,"

whose numbers, notwithstanding annual depletion, seem to be as large as ever.

The total number of patients under detention on Jan. 1st, 1898, amounted to 76,423, an increase on the number on the same date in the previous year of 2843. The total number of admissions during the year, excluding transfers and re-admissions on fresh reception orders, was 19,405, a number 191 in excess of last year's admissions. The actual number of patients discharged as recovered during the year amounted to 7230, being 52 more than in 1896. This increase occurs mainly amongst the private patients. The proportion of "stated" recoveries (the Commissioners carefully emphasise "stated") to the total number of admissions amounts to 38·35 per cent., as against 38·53 per cent. in the previous year. Of the total number of patients under treatment in 1897 7·34 per cent. were discharged *recovered* (the Commissioners' italics).

The death-rate calculated on the average number resident was 9·43 per cent., being 0·38 per cent. higher than in 1896, when, however, it was exceptionally low. The mortality table not only shows the causes of death, but also enumerates the number of post-mortem examinations made and gives the average age at death for each disease. The average age at death for males was fifty years and for females forty-nine years. It is important to note that the average age at death in cases of general paralysis of the insane was forty years, and the average age in cases dying from phthisis was also forty years. General paralysis and phthisis proved the most fatal maladies, the former accounting for 19 per cent. of the deaths and the latter for 14·5 per cent. The proportion of deaths from cerebro-spinal diseases was 40·5 per cent., from thoracic diseases 34·8 per cent., from abdominal diseases 8 per cent., from general diseases 6 per cent., and from other diseases—a group in which senile decay figures prominently—10 per cent.; accident, suicide, and violence accounted for 0·8 per cent. of the death-rate. The inference somewhat hastily drawn in last year's report that insanity in a form requiring treatment away from home is more frequently developed in the spring and summer than in the autumn and winter is not quite borne out on the second appearance of the new table introduced last year, for January occupies quite a prominent position, being third on the list, following closely on May and June.

The severely simple classification of insanity to which the Commissioners tenaciously cling may be described as somewhat out-of-date. In the table giving the yearly average occurrence of the "principal" forms of mental affection for the five years 1892–1896 the classification employed is "mania," "melancholia," "dementia (ordinary and senile)," and "other forms of insanity." It is perfectly certain that such a classification would not be found in any ordinary asylum report and the nomenclature is utterly unsuited to modern ideas.

The yearly average number of epileptics admitted during the quinquennial period 1892–1896 was 7·9 per cent., that of general paralytics 8·2 per cent., and that of patients with suicidal tendency 24·7 per cent.

Intemperance in drink and heredity appear to be the most frequent causes of insanity, but the Commissioners with reason state that "the tables dealing with the assigned causes of insanity are not very reliable."

In dealing with the distribution of pauper lunatics the Commissioners again call attention to the growing tendency to send to asylums cases formerly treated at home or in the workhouse. They state that "this tendency evidently continues to work, for the proportion of pauper lunatics in institutions for lunatics advanced from 74·59 to 75·16 per cent., an increase of 0·57 per cent., while there was a corresponding decrease in the proportions of those treated in workhouses or living with relations or friends. The cases so brought under asylum treatment are those of senile dementia or congenital weakness of mind." This is no doubt the case, but it is worthy of remark that the proportion per cent. of congenital cases to the total of the yearly average number admitted is steadily decreasing, being 4·6 per cent. for the quinquennial period 1892–1896, as against 5·7 per cent. forthe quinquennial period 1888–1892.

Owing to the opening of four new establishments the number of county and borough asylums is augmented to 74, the patients in these institutions being classified thus: private, 1254; pauper, 67,759; criminal, 120. The number of fresh admissions was 283 in excess of that of 1896, and it exceeded the average of the ten preceding years by 2317. Of these fresh admissions no less than 16·1 per cent. were cases readmitted into asylums from which they had previously been discharged. It is a significant feature that the proportion of such readmissions is steadily rising year by year, and it comes to be a question of serious import whether, owing to the number of admissions and the great lack of accommodation, there is not a tendency on the part of asylum authorities to create vacancies by shortening the course of treatment, and allowing the discharge of patients who have apparently recovered, but whose mental equilibrium has not sufficiently regained that balance, which is required to withstand the worry, the excitement, and the temptations of every-day life. It would really seem that the Commissioners are justified in using the word "stated" when alluding to recoveries in their statistical tables.

The deaths in the county and borough asylums amounted to 6659. Post-mortem examinations were made in 79·3 per cent. of the cases, a proportion almost identical with that of last year; the percentage of such examinations varies greatly in the different asylums. The deaths from suicides numbered 11; in two instances, however, the act was committed when the patients were absent on leave, and in another prior to admission. This is exactly half the number recorded in the previous year, and affords satisfactory evidence of the vigilance and care exercised by the staffs of the various asylums. Two murderous attempts were made by patients during the year; in one case upon a superintendent and in the other upon a male attendant. Fortunately neither was followed by a fatal result, but the repeated occurrence of such incidents clearly shows the dangers of the service and accentuates the claims of those engaged in it to exceptional liberality of treatment. This aspect of asylum life ought certainly to be borne in mind by the Legislature when the pension clauses of the belated Lunacy Bill again come up for discussion in the ensuing session of Parliament. 21 asylums are scheduled in which insanitary conditions prevailed to a greater or less extent. Typhoid fever, erysipelas, and colitis bulk largely in this return. Overcrowding, with all its attendant evils, is no doubt largely responsible for this state of affairs. The Commissioners have found it desirable to give particulars of various matters of detail affecting individual asylums. These relate principally to building extensions, insanitary conditions, overcrowding, fatalities, and suicides. While expressing regret at the burden imposed on the ratepayers they urge the need which exists for further accommodation for pauper lunatics, and state their conviction that delay in this respect is essentially false economy. The question whether the visiting committee of a county and borough asylum is entitled to charge a larger weekly sum than 14*s.* for out-county patients was referred to the Commissioners. They submitted a case for the consideration of the law officers of the Crown, who replied that in their opinion such larger charge could legally be made. Prohibitive rates will be a powerful factor in inducing those districts which have not the necessary accommodation to adopt measures for housing their pauper insane. The number of registered hospitals remains at 14. There are 7 institutions for idiots and 70 licensed houses. With regard to the latter the Commissioners express their approval of the efforts made to improve the accommodation for patients and to add to their comfort. They have to report, however, an unusual number of suicides in these institutions. Some correspondence took place between the Foreign Office and the Commissioners relative to the alleged detention of a number of British subjects in a French lunatic asylum. The matter was referred to the law officers of the Crown but no action was taken, the Commissioners being of opinion that no useful purpose would be served by taking proceedings. They express themselves as being well satisfied with the state in which they found the various institutions under their supervision.

All those engaged in lunacy work will echo the expression of regret made by the Commissioners concerning the sudden death of their valued colleague Dr. Wallis. His place on the Commission has been taken by Dr. Marriott Cooke, for many years the medical superintendent of the County and City of Worcester Asylum. Lord Hatherton has resigned his chairmanship of, and seat at, the Board.

On the whole the report maintains its high standard as an official record of the careful supervision exercised over the certified insane under increasing difficulties, and notwithstanding a few defects, to which attention has been drawn, it should prove an interesting study to all who are entrusted with the care and treatment of the insane.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 24, 1898.

THERE is still much obscurity about the pathology of the curious spasmodic affection known as "tetany," of which the main characteristic is an intermittent tonic contraction of the muscles of the extremities, especially of the fingers and toes, although the spasm is not in all cases so limited. It does, however, differ from true tetanus in its mode of onset, as well as in the march of the spasm, and also—except in the grave forms with which we propose immediately to deal—in its comparative benignity. It was not until the appearance of TROUSSEAU'S classical lecture on the subject that much attention was paid to the affection, although, as TROUSSEAU himself points out, it had even then been known and described several years before. He himself had been struck by the frequency of its occurrence in nursing women and in those who were recently delivered, so that from his early experiences he had gone so far as to term it "rheumatic contraction of nurses," the conception of a "rheumatic" basis being favoured, according to the knowledge of the day, by its apparent relationship to chill. He came, however, to recognise that this was but a partial description, although he never realised the full extent of its associations. However, in course of time he met with cases in both sexes and at various ages, many in infancy, when perhaps it prevails the most. He also found that it was frequently associated with teething, with chronic diarrhœal disorder, and that it might follow upon cholera and typhoid fever. At the same time he thought that its most common direct antecedent—its "exciting cause"—was exposure to cold. Readers of his lecture need not be reminded of the accuracy of the clinical picture which TROUSSEAU delineated. Little has been added by those who have come after him, whilst to him is owing the observation that the spasms can be excited by compression of the main nerve-trunks and blood-vessels. By him tetany was regarded as a comparatively trivial affection, for although he was careful to distinguish between the mild, moderate, and severe types—a distinction founded mainly upon the less or greater amount of general disturbance—he said that he had only met with one case in which death could be directly referred to the tetaniform condition. For the most part in his experience the symptoms would pass away within a variable period, the spasms intermitting with lessened frequency until after the lapse of a few weeks or a month recovery was assured.

Since TROUSSEAU wrote, many have contributed to the subject, especially writers upon diseases of children in whom it has been found to be largely associated with rickets and with the diarrhœa or general marasmus which may accompany that nutritional disorder. Yet there still prevailed a very hopeful view as to the prognosis of cases of tetany. It was not until attention came to be directed to the supervention of tetany upon gastric dilatation in adults that a change took place in this favourable prognostic opinion. In association with that visceral condition tetany assumes a more serious significance and its supervention must always be regarded with anxiety, if not with alarm. Hence writers upon diseases of the stomach speak in quite different fashion from TROUSSEAU and others as to the outlook in cases of tetany; they aver that its prognosis is "very bad" and mention 70 per cent. as the mortality of cases in which it arises. This changed attitude in regard to the character of the affection is borne out in the papers by Dr. SOUTTAR MCKENDRICK and Dr. TREVELYAN, which we publish elsewhere, and which, moreover, contain all that can be said on the subject, the interest of which does not rest merely upon its comparative rarity. Indeed, we are sanguine that the appearance of these suggestive and full records may lead to further contributions and perhaps to the demonstration that tetany and allied states in less grave forms are observed in association with gastro-intestinal diseases more frequently than is generally believed.

The clinical features of a well-marked case are readily recognised, but the questions which afford most scope for discussion are those connected with its etiology and pathology. These have been fully and ably discussed by Dr. TREVELYAN, so that we ought almost to apologise for venturing to make any further comments on the subject were it not that some good may be done by exciting interest in this "gastric tetany," as he succinctly terms it, by fixing attention on the problems which surround it. Now, although tetany may be met with in association with many and varied states its relationship with dilatation of the stomach appears to be so definite and, so to speak, so constant (using the term in a general sense) that it must, in such cases, depend on the conditions peculiar to that state of the viscus. The main circumstance is of course the retention of more or less partially digested material in various stages and kinds of fermentation. It is conceivable that these may act as irritants of gastric nerves and thus excite reflexly the muscular spasms of the tetanoid state. The fact that tetany has been known to supervene on lavage of the stomach, or even during its performance, might be cited in support of such a view, and perhaps the remarkable frequency of tetany after thyroidectomy might be deemed also to bear on the theory of nerve irritation. But nowadays, and not without reason, the doctrine of reflex nerve irritation has been found insufficient in cases where it was formerly thought to explain all. The "reflex neuroses" are fast becoming obsolete, and wherever a more tangible theory can be framed it is to be preferred. Another view, propounded by KÜSSMAUL and supported by some, is that the whole nervous system shares with the tissues generally in a dehydration owing to the excessive loss of water by copious vomiting, as well as by the abundant secretion which is poured into a dilated stomach. To our thinking more satisfactory and more rational is the reference of the condition to toxic agencies, and this on more than one ground. In the first place, the production of toxins of many and varied properties cannot but occur in the fermenting contents of a dilated stomach. In the second place the experiments of BOUCHARD

have shown that some of the products of urinary excretion in health and disease are direct poisons to the nervous system. What, then, is more likely than that in certain subjects, and under certain conditions which cannot as yet be formulated, poisons are produced which are capable of exciting the nerve centres so as to produce the phenomena of tetany? It should, of course, be possible, if this were the case, to analyse the contents of a stomach after the method adopted by BOUCHARD in respect to the urine, so as to ascertain whether they included any nerve poison of this type. Perhaps this may be done in the future. Meanwhile we must be content to act on the hypothesis and must not hesitate in cases of gastrectasia in which this dreaded complication is arising to thoroughly relieve the stomach of its contents. In one of Dr. TREVELYAN'S cases some temporary relief was obtained by this measure, but the patient sank from exhaustion. It is noteworthy, however, that on the previous day when the symptoms were fully marked, there had been a fruitless attempt at lavage, and it may be that the performance of the operation is too difficult in such circumstances. This is all the more reason why attention should be drawn to the earliest symptoms, in order if possible to resort to lavage before the tetany becomes fully developed. Nor can we pass from the contemplation of these fatalities without raising the question again as to the probability of the occurrence of slighter manifestations of nervous disorder directly referable to the gastrectasic condition. *A priori*, if the toxic theory be the correct explanation, it might be thought, considering the large number of cases of gastric dilatation and the fewness of the severe and fatal cases of tetany which complicate them, that cases of less severe intoxication should not seldom occur. Cases of slight and transient spasm, of cramps, of temporarily deranged sensation may arise and be so trivial as to escape the observation of the medical adviser or be disregarded by the patient himself. So, if they do occur their existence would go far to confirm the opinion of the toxic origin of tetany, which is not gainsaid by the conditions of its occurrence in children, in nursing women, or after thyroidectomy.

THERE are two Italies, and they are as wide as the poles asunder. There is the Italy of romantic tradition and there is the Italy of prosaic reality. It is as the former that outlying Europe, or we should rather say the English-speaking world, persists in regarding her, and with consequences by no means favourable to Italy herself. The interest she has inspired and the sympathy she has aroused have made her the "spoiled child" of her more civilised contemporaries, bringing her moral and material help which had far better have been evolved from within her own borders, to the reinvigoration of her own character and to the acquisition of self-reliance, independence, and the nobler virtues which spring from such discipline. Her liberty and her unity she owes mainly to external forces—to foreign allies who, like France and Prussia, assisted her for ends not wholly unselfish, or who, like Great Britain, gave her a moral, and in the long run a more substantial, because disinterested, support. After she became united and free it was still to the kindly outsider that she was indebted for material as for moral aid. To the English-speaking visitor she owes about one-third of her revenue in gold; to the English-speaking world she almost spontaneously looks for sympathy and succour in political adversity or calamitous visitation. Does a disastrous flood reduce one of her districts to homelessness and want, Great Britain's charitable aid is always forthcoming. Does an earthquake bring ruin on one or other of her islands, the same free-handed largess is never appealed to in vain. So much is this the case that such visitations are looked upon by provincial Italians as "providential" in a double sense—"Providential" as coming from on high; "providential" as providing means often much in excess of the occasion which evoked them.

Italy, indeed, has, by the rueful admission of the best of her publicists, come to be a "moral mendicant," with the disastrous consequences to character induced by such a *rôle*. Beggary is an "institution" within her borders, and those of her sons who try to put it down by introducing the atmosphere of self-respect which should be fatal to it find in the thoughtlessly free-handed Englishman or American the greatest obstacle they have to encounter. This indulgent attitude towards her and hers has all the force of a conspiracy—kindly, if unconscious—to keep her *in statu pupillari* among the nations—to perpetuate the truth of MASSIMO D'AZEGLIO'S bitter exclamation: "Fanciulli siámo" (children we are). Her well-meaning but injudicious friends are, indeed, her worst enemies, who have only to be a little more familiar with her or her real, not her romantic, side to do her the genuine and lasting service of leaving her to work out her own salvation.

"Italia farà da se" (Italy will suffice for herself) was the watchword of the creators of her "Risorgimento," and it is high time that she revived it and made it practically operative. She has within her own personality all the means of self-rehabilitation, but she must be taught to rely upon them. "The cleverest people in Europe if only they had staying-power," was the verdict of a great British engineer who had been in touch with their inner life for nearly half a century. "Steadiness, steadiness, the English steadiness," was the one requisite they needed for success in GARIBALDI'S estimation. But how to acquire it when the moral fibre, relaxed by long subjection, is kept flaccid by influences from without and never feels the tonic of effort from within? The native genius is in these circumstances perverted and all its development moulded to the utilisation of opportunity casually presented, not to the creation of means or the fusing and welding of nature's own material for the working out of ends conducive to common good. We have thus in Italy a mediæval spirit struggling for existence amid nineteenth-century institutions, showing admirable ingenuity and subtlety and nimble resource as a substitute for the manlier, maturer, and more effective qualities of latter-day evolution.

Corruptio optimi pessima est. There is more wit and talent put forth in Italy for the attainment of illicit objects than healthily constituted countries expend on legitimate undertakings. We have to go back to "Gil Blas" for examples of clever knavery similar to those perpetrated in the kingdom every day. Even crime

within its borders is romantic and serves to keep up the fatal "interest" in Italians which makes them the object of a foolish fondness on the part of other peoples. Leaving aside the brigandage which, as in the recent case of the Tuscan Tiburzi, recalls the "forest days" of ROBIN HOOD, we find the swindler plying his *métier* with a dramatic skill which extorts an unwilling admiration. Take two specimens which came off within twenty-four hours in the city of Florence not so long ago. The scene is a *trattoria* or restaurant in the suburbs. A young man and his sweetheart are at a table conversing over a frugal meal. Presently a well-dressed gentleman comes in and at another table orders a more luxurious repast. The landlord is attracted to the first-mentioned table—the pair being obviously in difficulties. The young man has forgotten his purse. "I cannot let you go without paying," says the irate Boniface; "you have a watch, leave that with me and then you may go home for the purse you say you have left behind." The young man, not without protest, gives up his chronometer and the landlord is returning to his coign of vantage, when the gentleman, who has been a witness of the scene, rises and stops him. "Your conduct to that young man, sir," he says, "is shameful. Anyone may forget his purse. Give him back his watch and include his bill in mine and let him go if you ever want me as a customer again." Producing a pocket-book well filled with bank-notes the gentleman hands a 100-franc *biglietto* to the landlord, who sulkily restores to the youth his watch, makes up the double bill, and gives the gentleman some 90 francs in change. First the pair go out and then the gentleman, leaving the landlord half glad and half sorry for the incident which gave him his money and cost him a reprimand. Days afterwards he has to pay a large sum, towards which he adds the 100-franc note received from the gentleman, only to find it a clever counterfeit. While this drama *à la* LE SAGE was being played another even more effective was in course of performance. At an hotel, also in Florence, a traveller for a large jewellery firm has put up and is already doing good business. A gentleman appears, makes purchases to the amount of twelve hundred francs, for which he gives notes of unexceptional genuineness and goes his way. An hour afterwards a delegate of *Pubblica Sicurezza* comes in and takes the traveller aside, wishing to have a word with him privately. "You have just sold some jewellery," he says, "to an individual who paid you twelve hundred francs for it?" "I have," replies the traveller. "You have been victimised, sir, by a swindler well known to the police," says the *delegato*. "How so?" inquires the dismayed traveller. "There are the notes. They are perfectly genuine." "They are nothing of the kind," says the *delegato*. "They are imitated admirably—the work of a well-known gang of forgers. But keep your mind at ease. Your jewellery is quite safe at the police-office, where you will find it along with the swindler, whom we have arrested. Call there at four o'clock and you will get your property back. Meanwhile give me the notes. They are required to identify the forgery." The traveller gave up the notes, called at the police-office, found neither delegate nor prisoner, but found only that by consummate acting he had lost twelve hundred francs' worth of jewellery and also the perfectly good money which had been paid for it.

Such occurrences are of daily experience and explain the phenomenon that Italian fiction is poor—poor out of al proportion to the literary skill of the people. It is beaten out of the field by fact, chronicled day after day by the police-reporter. When is all this perversion of ingenuity and labour and forethought to be replaced by the honest employment of the same qualities towards legitimate ends? When Italy becomes true to herself, is the answer; when she recognises the fact that, "hooked on to the express train of the nineteenth century," she must conform to the new conditions of progress; and, above all, that she must count as her worst enemies those whose kindly forbearance with her shortcomings and free-handed ministration to wants of her own contracting keep her in the mediæval stage from which she was supposed to have emerged.

LORD WOLSELEY'S homily on Intemperance and Immorality among Soldiers, which was issued as an Army Memorandum last April, has now been republished in the form of a Parliamentary paper and will, no doubt, thereby gain in weight. His lordship in forcible language calls upon all officers in command of troops, batteries, and companies to perform their bounden duty in directing and controlling the morals of the men over whom they are placed in authority, and that not only by precept but also by example. Young soldiers in particular should be encouraged to look to their superiors for example and guidance amid the temptations which surround them and to expect ready sympathy and counsel in all their difficulties and troubles. Officers and also non-commissioned officers are repeatedly directed to do their utmost to promote a cleanly and moral tone among the rank and file and to spare no effort in watching over the physical and moral welfare of the men for whose proficiency in military exercises they are responsible. This is certainly expecting a great deal, for it must be remembered that the vast majority of company officers are young men themselves, obnoxious to the same temptations as the private soldier and totally destitute of special training as instructors in morality. British officers, however, have invariably proved themselves worthy of trust and the nation may with confidence expect to see the Commander-in-Chief's instructions fulfilled in the spirit as well as in the letter. Throughout his Memorandum Lord WOLSELEY deals in generalities—with one single exception. "Surprise visits" for the detection of suspected immorality are enjoined and this, we venture to say, is a weak point in the otherwise admirable exhortation. Everything which savours even distantly of espionage should be avoided in the management of British soldiers. The British soldier is *primâ facie* an honest man and must on no account be treated as though he were *ipso facto* an evil-doer. If he finds that he is liable to be tracked and pounced upon as though he were a hardened criminal he will very soon lose his self-respect and seek in every underhand way he can think of to outwit the detectives set over him. Straightforwardness is the best policy in dealing with the class of man whom it is desirable to attract as a recruit. Trust your soldier and let him see that you do so, should be the golden rule amongst all who

are charged with authority in the army. On active service spying out the enemy is no doubt advantageous, but as an item of internal economy among grown men in barracks surreptitiousness of every description should be rigorously interdicted. With regard to the preliminary training of both officers and private soldiers there are several points which urgently demand attention. Before a recruit is allowed to fire ball-cartridge he must have given proof that he thoroughly comprehends the mechanism of his piece as well as the effects of the discharge. Should his arm be the lance or the sabre his dexterity with these weapons is tested before he is allowed to manipulate them at large. Drills without number and exercises beyond computation have to be endured before the neophyte receives permission to take his place in the ranks. In a word, the utmost care is taken to educate the young soldier in the art of killing or maiming his enemy, but by stopping short at this point the instructors have only half equipped their man. In order that a soldier may be in a condition to do his country the maximum amount of service it is necessary that the art and science of taking care of his own health should be included in his curriculum. Even on home service it is highly desirable that this should be so; but abroad, where our troops have to live under conditions largely differing from those to which they have been accustomed, it should be made a *sine quâ non*. When a soldier fails to preserve his health he forthwith becomes an encumbrance in the field, a source of weakness instead of a source of strength. Not only are his individual services wasted, but also the services in whole or in part of several of his comrades. As regards the efficiency of the force it would be better for him to die than to fall lame. For a soldier actively engaged there is nothing more important than health and yet no attempt is made to teach him how to preserve it. In addition to teaching their men how to be moral it would be well if commanding officers were to be directed to teach them the essentials of personal hygiene, with especial reference to the requirements of the locality where they might happen to be serving. A course of lectures at the canteen could not but be advantageous provided the lecturer were properly equipped for his task. Of this, however, he would need to furnish unquestionable proof, for of all branches of knowledge in which a little learning is a dangerous thing there is none to surpass self-medication.

THE recent regulations of the General Medical Council prohibiting the employment of unqualified assistants, save in an entirely subordinate way, have a very obvious application in holiday times. It is absurd to think that although an unqualified assistant may not be allowed to have sole or serious charge of cases, yet such an assistant may be left in a position by his principal during the holidays which would place him at any moment in responsible care of the whole practice. This very obvious point seems to be overlooked by some practitioners. During the holiday season in past years medical men have experienced the reality of the risk and have been subjected to the odium and the inconvenience of censure at inquests as well as of being brought before the General Medical Council with the chance of being found guilty of infamous conduct in a professional respect, and of having their names erased from the Register. There is too much reason to think that the warning conveyed by these facts seems to have been, like so many other warnings in the matter of unqualified assistants, overlooked. In one case recently investigated by Dr. WYNN WESTCOTT and a jury an unqualified assistant, in the absence of the principal, was sent to a serious case by the qualified assistant. The excuse of the qualified assistant was that he could not be in two places at once, and that "half a loaf" (an apt name for an unqualified assistant) was better than no bread. In the end the qualified assistant was censured and the coroner was asked by the jury to forward a report of the proceedings to the principal "and to the General Medical Council so that they could take what steps they thought necessary in the matter." It is not for us, of course, under these circumstances, to pass any judgment on the facts of this particular case. But we should fail in our duty if we did not give them prominent notice as a lesson to others. A holiday should be no holiday to a medical man if made under conditions of such risk as we have described, for his apprehensions of mischief should prevent him from enjoying himself. The instructions and arrangements of a principal on leaving town should be such as to make sure that his patients can be attended by a qualified representative. It is only by such arrangements that he can enjoy that sense of irresponsibility which, after all, is the very essence of a holiday. It may be said that the remuneration of medical practice in poorer neighbourhoods will not always admit of a principal keeping qualified assistants or paying qualified locum tenents. Then the public must understand that if they are to have fully equipped medical men they must pay for the service they receive. But we can scarcely think it possible that in any part of London a medical man would not be able to make arrangements with his medical neighbours so that they might share his responsibilities in his absence. The cultivation of neighbourly amenities is not only a duty but an advantage, and one at no time more obvious than in holiday seasons.

Annotations.

"Ne quid nimis."

COUNTRY HOUSE DRAINAGE.

THE problem for solution in a letter signed "South Dublin" which will be found on p. 846, is one of perplexity to most responsible dwellers in rural districts. The extremely unsatisfactory provision for the disposal of the house drainage described in our correspondent's letter is shared by many thousands throughout the country. The great importance of the question induced us recently to issue a Commission upon the subject of water-supply and the disposal of sewage in rural districts, the two questions being so intimately connected. The result of this inquiry will shortly be published and will afford more complete information than can be given in an annotation. Soak-away cesspools, such as are described by "South Dublin" are not only objectionable but must constitute a source of grave danger to the springs from which the water-supply is derived. The sewage, escaping as it does under pressure below the surface of the ground, depends entirely upon mechanical filtration through the soil

for its purification, and in a limestone district will often travel for miles through fissures without undergoing any material improvement. Bacterial life, the mainstay upon which we depend for the breaking up of organic into harmless inorganic substances, scarcely exists 12 in. below the surface of the ground, and can therefore exercise no influence upon matter escaping below this point. The contamination of the rain-water by first discharging it into the cesspool and afterwards having to disinfect it seems a somewhat useless mode of procedure. This should be made to go directly into the ditch mentioned by our correspondent. Disinfectants are at best but a poor substitute for the process of disintegration provided by nature through the means of bacteria, the existence of which process recent research has revealed. Experiments have proved that secondary decomposition invariably takes place in a short time after using disinfectants; they do not prevent but only delay a natural process. If used, quicklime is perhaps the best and cheapest for this purpose, and in this case it should be thrown into the ditch. The principle which would appear to provide at once the simplest and the most effective method of dealing with domestic sewage where water carriage is adopted, is one which was first practised by Mr. J. Scott Moncrieff in his microbe cultivating tank. This consists of passing raw sewage through a brick channel filled with round stones upon the surface of which various bacteria of a non-pathogenic character always present in excreta rapidly multiply. They convert the solid organic constituents into a liquid form. This view is confirmed by the experiments carried out a short time back by Mr. Dibdin (when chemist to the London County Council). This gentleman passed large quantities of raw sewage slowly through a pit filled with various materials, such as coke, burnt ballast, small stones, &c. He found that a comparatively clear effluent was obtainable with either material, provided that the pit or filter had at least one week's rest in five. He found the coke perhaps the least desirable. For such a case as that described by "South Dublin," in place of the existing cesspool two channels or filters would be required, formed side by side. They should be six or eight feet long by three feet wide and cemented internally to prevent the escape of the liquid sewage. These should be filled to a depth of about two feet with stone or pieces of burnt ballast measuring, say, about two inches over each piece. The effluent should be made to flow out at the level of the top of the stones, and provision must be made for running off the liquid from each filter once every month, the incoming stream being diverted into the neighbouring filter, for which purpose some simple provision must be made. The effluent can then be allowed to pass into the ditch without any annoyance being caused. It is better to fill the filters above the stones to the level of the ground with washed gravel. At periods varying from six to twelve months the stones must be taken out and laid at the side of the filter so as to be exposed to the air, but they must not be washed, and any accumulated sludge should be removed from the bottom of the filter. This last had better be buried at once in the ground. Mr. Scott Moncrieff's tank provides the most satisfactory conditions for the conduct of the foregoing arrangement, but how far the application of the principle is covered by his patent rights is a detail.

THE HURRICANE IN THE WEST INDIES.

THE recent hurricane in the West Indies, which affected principally the group known as the Lesser Antilles, has worked great havoc. The islands which have suffered most are Barbadoes, Santa Lucia, and St. Vincent. The governor of Barbadoes has telegraphed home that 50,000 persons are homeless, and he most earnestly entreats financial help as in its present financial condition the colony is quite unable to bear the strain. Up to Sept. 19th 83 deaths had been reported. The Administrator of St. Vincent sends the following report: "Speaking generally, about three-quarters of the population, 41,000, are shelterless, without food, and crowding into the populous centres, which have no accommodation for their own inhabitants, much less for the hundreds of others who are coming in. From Argyle to Kingstown on the windward side there is not a single works or estate house standing. From Buccament to Kingstown on the leeward side everything is destroyed. Kingstown has hardly a house uninjured, and most of them are in ruins; two vessels are ashore, two have sunk, and the fate of others is unknown. It is unnecessary after this to say that almost all the labourers' houses are lying flat. There are at least fifty deaths that are known of the people that are flocking into Kingstown from all the country round for shelter and food, which I am endeavouring to supply for the moment until the weather clears and we can take the damage in detail. So far I have no news of the country beyond Argyle to windward or beyond Buccament to leeward, but I fear that the disaster there cannot have been less than in the southern part of the island. Reports from windward report everything as far as Grand Sable a wreck; that there are two large ships and one small one ashore on the windward coast, and the manager of Sans Souci, Mr. Hillocks, has been killed. From leeward everything is a wreck with much loss of life; in Barrouallie everything levelled to the ground except three buildings; Château Belair reported not to have suffered so heavily, but no reliable information yet." The Governor is borrowing necessary funds to provide relief. From Santa Lucia the accounts are as follows: "Tremendous rain with thunder and incessant lightning all Sunday (Sept. 11th) night. The following information received to-day from coast: 'Immense landslips at Soufrière; five deaths; ten houses and two bridges washed away. A tidal wave did much damage at Choiseul; 7 deaths occurred from landslips. Cocoa estates have suffered immense damage and many are quite ruined. No news from westward; roads impassable; all telephone lines down. Steamer *Deramore* returned to the port last evening with three men rescued off this island from waterlogged schooner *Ocean King* of Saint Vincent.'" Food is running very short in St. Vincent and a steamer has been sent from Trinidad with supplies.

SHOULD PREGNANT WOMEN WORK?

IN a paper in the *Annales de Gynécologie* for August, 1898, Professor Pinard continues his observations with regard to the influence of rest on the part of the mother during pregnancy upon the development of the fœtus. In a previous paper he had shown by observations upon 1000 infants, 500 born of mothers who had had to work up to the end of their pregnancy and 500 born of mothers who had been able to rest for varying periods not longer than ten days before their confinement, that there was a marked difference in weight in favour of the children of the latter class. In further confirmation of his views he quotes from a table drawn up by Dr. Bochimont, based upon 4445 cases showing the average weight of the children of women who had been compelled to work during the whole of their pregnancy and of those who had been able to rest for periods of two, three, or more months. From the results set out in the table he comes to the conclusion that the average weight of the child of a woman who is able to rest for the last two or three months of her pregnancy is greater by at least 300 grammes than that of the child whose mother is compelled to work up to the date of her confinement. The explanation of this difference appears

to be the fact that the duration of pregnancy in the former class is more frequently normal, while in the latter it is often prematurely interrupted. The more frequent occurrence of premature confinements amongst the workers he attributes to a tendency to premature expulsion of the ovum produced by a greater descent of the uterus into the pelvis. The truth of this assertion is to some extent confirmed by the observations of Dr. La Torre upon the development of the fœtus in women with contracted pelves. Dr. La Torre's conclusions are that premature confinements are more common in women with normal pelves than in women with contracted pelves and that the products of conception attain the same degree of development in the former as in the latter class. Professor Pinard from his experience goes further than this and holds that the average weight of the children of women with contracted pelves is greater than the average weight of the children of women with normal pelves. The condition of a woman with a contracted pelvis he regards as comparable to that of a woman who is able to rest during the last few months of her pregnancy, in that the child is lying mainly in the abdominal cavity and to a less extent than usual in the true pelvis. In the case of a woman, on the other hand, who has to work standing or sitting the tendency is for the child to lie low in the pelvis and as a result of this premature delivery not uncommonly occurs. Many factors no doubt enter into the question of the development of the child, and it is asserted by some writers that the physique of the mother herself must largely determine the size of her child. The fœtus *in utero*, however, has been well termed a true parasite, and, as Professor Pinard points out, cases of contracted pelves in which the mother is often mal-developed and of small stature seem to show that the development of the mother has but little influence, since in these cases the children show no corresponding want of development, but on the contrary are often above the average size. In conclusion, he cordially agrees with Dr. Bochimont's recommendation that "from the point of view of humanity, from the point of view of the increase of the population, from the point of view of the evolution of the French race it is necessary that the public authorities should intervene to safeguard the pregnant woman during the last three months of her pregnancy and the fœtus during the last three months of its intra-uterine life." Such paternal intervention is hardly likely to be ever necessary or called for in this country, but from a consideration of this paper the interesting question arises, What is the best mode of life for a woman to pursue during the last three months of her pregnancy? Should she be allowed to work or to take exercise, or is she best kept at rest as much as possible? A compromise must no doubt be effected between these two extremes, and while the interests of the mother will be best served by a moderate amount of exercise and a minimum amount of work the development of the child and the avoidance of a premature confinement would appear to be most favoured by a maximum amount of rest.

A CENTRAL BACTERIOLOGICAL LABORATORY FOR LONDON.

A CORRESPONDENT writes: A short time ago the London County Council addressed a communication to each of the vestries and district boards throughout the metropolis asking them whether they would be in favour of the Council applying for Parliamentary powers to establish a bacteriological laboratory. The idea is to appoint an expert or experts in connexion with the projected institution, or otherwise to make arrangements whereby medical officers of health and medical practitioners in London can obtain at the expense of the county the examination by a competent bacteriologist of material from suspected cases of infectious disease, with a view to aiding in the diagnosis. Owing to the summer vacation of the various local authorities the proposition has not yet been fully considered by the majority, but as far as those are concerned who have paid attention to the question the scheme has met with unanimous approval. Among those authorities who have already pronounced in favour of the project may be mentioned Bermondsey, Shoreditch and St. Pancras. In the case of Shoreditch the Health Committee of the vestry point to the laboratory established by the City of New York some five years ago in connexion with a scheme for general bacteriological examination of cases of diphtheria and state that it has been received by the medical profession of that city with almost unanimous approval. The Shoreditch committee mention further that several towns in the provinces and some of the London sanitary authorities appear to have also made arrangements whereby medical practitioners can send pathological material to experts for bacteriological examination. Believing that it would be desirable in order to secure uniformity and economy that such provision should be made, the Shoreditch vestry has just informed the London County Council of its advocacy of such a laboratory. In St. Pancras the vestry has already made some progress in the direction indicated, since from a report just submitted to the Health Committee by Dr. John F. J. Sykes, medical officer of health, it appears that the vestry early last year sanctioned the examination of pathological material in doubtful cases of diphtheria and typhoid fever, the examinations being made when necessary and when considered essential to the proper notification and prevention of the spread of the disease to which they apply. Two questions have to be considered: (1) whether it is more desirable to carry on the work locally or to centralise it, and (2) if centralised, which is the best method of centralisation. In this connexion the Health Committee of the St. Pancras Vestry states that the systems have been organised by the several sanitary authorities in conjunction either with the British Institute of Preventive Medicine, the Clinical Research Association, or the bacteriologists of the large London hospitals. At the same time the small hospital laboratory at each of the larger infectious diseases hospitals of the Metropolitan Asylums Board is utilised for the purpose of examinations of this nature. Taking all the points into consideration, the St. Pancras vestry has come to the conclusion that a central bacteriological laboratory should be established and has expressed the opinion that such an institution could be provided by the Metropolitan Asylums Board, under the latter's Parliamentary powers, in the new premises now being built on the Victoria Embankment. A letter to this effect has recently been addressed to the London County Council. As the London County Council does not meet until next month and as the vestries and district boards are only now beginning to resume their proceedings, some little time will elapse before all the replies are in the possession of the Council. As these will not require much consideration, it is possible that the Public Health Committee may be in a position to submit to the Council a recommendation on the subject early in November next.

POISONOUS SHRIMP PASTE.

THE indiscriminate way in which the sea water bordering our coasts is sometimes polluted is sufficient in many instances to account for the symptoms of poisoning now and again occurring after the consumption of fish. In the case of shell-fish which are eaten without being cooked the symptom may be very possibly due to the action of micro-organisms. In the case, however, of poisoning by cooked fish no such explanation is admissible. It is difficult, therefore, to account for the number of cases of acute poisoning which occurred at St. Anne's-on-Sea, near Blackpool, a week or so ago. Shrimps in this case were the *sole*

et origo mali. The shrimps were potted and had been cleaned and cooked in the usual manner and converted into a paste with the aid of butter. The symptoms were precisely those of irritant poisoning—diarrhœa, vomiting, and severe pain, especially in the bowels, being very marked. Some forty people were thus affected, but happily medical advice was soon sought and no fatal result was recorded. It would be interesting to know whether an analysis of the shrimp paste was made and if so whether it threw any light upon the occurrence. Possibly the shrimps may have assimilated a mineral poison, notable quantities of copper, for example, having been found in certain shell-fish. It would seem more probable, however, that the poison was organic in nature—some obscure product of decomposition consequent upon the prevalent excessive heat. In THE LANCET of Sept. 10th we pointed out the great number of cases of poisoning which occurred within a few days and which were due to some mysterious changes taking place in composition through prolonged exposure to a temperature approaching blood-heat, the most favourable point for the fostering and growth of micro-organisms and consequently their poisonous excreta. In the absence of further evidence it is probable that the shrimp paste, especially as it was fairly fresh, had undergone similar changes.

THE APPLICATION OF STEAM TO THE INTERIOR OF THE UTERUS.

DURING the four years which have elapsed since Snegirjeff first proposed the use of superheated steam for the arrest of hæmorrhage a good deal has been written upon the employment of this agent in the treatment of bleeding from the interior of the uterus. Amongst others, Pincus of Dantzig has used this mode of treatment with very encouraging results. He has perfected two methods of carrying it out which he terms respectively atmocausis and zestocausis. In the first the steam is applied directly to the interior of the uterus by means of a double-channelled intra-uterine catheter (atmocautery) provided with fenestræ in both tubes; in the second the steam is employed to heat the outer tube, which is unfenestrated and which then acts as a cautery (zestocautery), and can be applied to any part of the uterus which it may be desired to treat. The intra-uterine application of steam is not without its dangers, and the fact that the result aimed at in certain cases is total obliteration of the uterine cavity shows what it is capable of effecting and at the same time what disastrous results may follow if it be not carefully used. Two cases of unintentional obliteration of the uterus have been recorded, one by Baruch where the method was employed to arrest secondary post-partum hæmorrhage, and the other by Otto von Weiss where in a young girl, aged nineteen years, steam at 100° C. was applied for three-quarters of a minute to the interior of the uterus for the arrest of profuse menorrhagia. The duration of the action should be from ten to thirty seconds. If total obliteration of the cavity be desired it must be continued for from two to three minutes. The steam generated in a vessel furnished with a safety valve is used at from 100°C. to 115°C. Preliminary dilatation of the cervix is necessary in all cases, and if the action is to be limited to the interior of the body of the uterus gauze must be bound round that portion of the tube which will lie in the cervical canal. The vagina is protected from burning by a short tubular wooden speculum. The applications should not be repeated oftener than once a month, that amount of time being required to regenerate the mucous membrane. The period of time which elapses before the destroyed mucous membrane separates is an indication of the depth to which the cauterisation has extended; if it be merely superficial the interval is usually from six to ten days. The method is recommended for all forms of endometritis, subinvolution of the uterus, for disinfection of the uterine cavity, in cases of inoperable carcinoma of the body, in climacteric hæmorrhages, and in senile catarrh. In the two latter instances it may be used to produce total obliteration of the cavity of the uterus, and it is suggested that this may replace in some cases total extirpation of that organ. It is contra-indicated in cases of suspected malignancy, in affections of the appendages, and in cases of markedly rigid cervix (Pincus). Pitha records the results of 46 cases treated in Pawlik's clinic. 28 of the cases suffering from hæmorrhagic endometritis all recovered. In 10 cases of hæmorrhage following miscarriage decidual remains were first removed by the curette before applying the steam. These also recovered. The danger of the occurrence of unintentional obliteration of the uterine cavity appears to be greater after the application of steam than after curettage, but it is possible that such a result may ensure a more perfect recovery in certain cases such as those indicated by Pincus—viz., uncontrollable climacteric hæmorrhages and profuse senile catarrh. In all cases where intentional obliteration is carried out protection of the cervix is necessary in order to prevent closure of the cervical canal occurring before that of the body of the uterus. In some cases the use of steam would appear to be preferable to the use of the curette, as, for example, in cases of submucous and interstitial fibroids, where the operation of curettage may result in damage to the capsule of some of the tumours followed by sloughing. The reckless employment of such a powerful agent as steam may, however, be productive of much harm, and it is necessary, therefore, to utter a caution against its use except in carefully selected cases, especially where curettage has failed, and with a due observance of all the precautions necessary for the successful carrying out of the treatment. Our Berlin letter contains, it will be seen, an account of a paper on this subject by Professor Dührssen.

THE PRESS AND WATER ANALYSIS.

IT is idle to dispute the educational power of the press so long as it keeps its readers well and intelligently informed, but the lay papers now and again ill-advisedly attempt not only to record matters of a highly technical character, but also to serve up an interpretation of the same which may be very misleading and indeed serious. In an evening paper last week an analysis of a sample of the East London Company's water taken from a public standpipe was published and above the analysis and contents was printed a heading of a very sensational character, such as is calculated to inspire needless alarm and perhaps panic. We doubt whether the great bulk of newspaper readers understood one word of the analytical report, or if they did it would only be those sentences which would probably convey a wrong idea. The condition of things in regard to water-supply is quite serious enough without attempting to alarm the public with such statements as the following: "The sample of water was very impure and contained over two thousand microbes per cubic centimetre. Drinking such water might give rise to infectious or other diseases (typhoid fever, cholera, &c., are water-borne diseases). It is well known that cholera spreads more rapidly when the temperature is high and when the ground water is low. Consequently the present low condition of the company's water-supply is indicative of disease. It may be stated that the typhoid fever microbe can retain its vitality for a considerable period of time in water and it may multiply almost to any extent in that medium." Now these remarks are simply volunteered information, for this report says nothing of the existence of either the typhoid or the cholera bacillus. The object of the writer is clearly indicated in such sentences as, "It *may* multiply to any extent,"

and "The present low condition of the company's water-supply is *indicative* of disease." We do not believe that the quality of the water-supply up to the present is open to serious condemnation, otherwise we should find evidence of it in the health returns and there is no indication of any general prejudicial effect having so far been produced by the scarcity of the supply. It must be borne in mind that in spite of the reduced volume of water and of the flow of rivers yet in summer there are very powerful purifying agencies at work and, as a matter of fact, the maximum of purity of the London supply is invariably attained in the summer. Sunshine, doubtless, is the most important factor in this connexion. We might point also to the condition of things which prevails in southern Europe, as in Spain, where, in spite of the absence of rain for months together and the existence of insanitary conditions in the streets, the effect upon the public health is hardly as commensurate as might be expected with these conditions. There is no doubt that the intense sunlight serves as a powerful bactericide and compensatory factor. Such reports as we have pointed out do not help to tide over the difficulty and distress of a water famine, but, on the contrary, may bring about incalculable and perfectly needless harm, followed perhaps by insensate and groundless panic.

THE PLAGUE IN SIND.

IN a paper which was read at a meeting of the Bombay Medical and Surgical Society last July, Surgeon-General Bainbridge, I.M.S., gives a detailed account of the epidemic of plague which occurred in Sind in 1896–97. The communication was based on the author's official report bearing date Oct. 25th, 1897, a document which he describes as "the earliest complete account by a medical man of any outbreak outside the city of Bombay," but he further adds that the views therein set forth are in the main confirmed by the information which has since been recorded both in Sind and elsewhere. The first case of plague in Sind was reported at Karachi on Dec. 10th, 1896, and the last on July 27th, 1897, the total recorded cases during the period having been 6439 with 5182 deaths, or 80·4 per cent. The way in which Karachi became infected was not traced, but the importation of the disease by sea from Bombay was clearly possible as there was considerable traffic between the two ports and the three-day transit by steamer was free from restrictions "except in the case of vessels which had had a case on board or which carried no doctor." However it may have been introduced the plague spread slowly throughout the province, following the movements of infected persons, a quiescent interval of about one month in each fresh focus being usually observed before the bursting forth of the local manifestation. "This leads to the inference," continues the writer of the paper, "that the bacilli do not infect until they have gained a certain degree of potency and that they require certain media for their development. How infection takes place," he proceeds to say, "cannot at present, so far as I am aware, be demonstrated with certainty. It is known, however, that the infection (*a*) will prevail in certain dwellings and amongst certain families, whilst others in the immediate vicinity will escape; (*b*) that the spread of plague is associated with, or favoured by, overcrowding, dirt, and other insanitary conditions; (*c*) that contact with, or contiguity to, persons suffering with plague will, under certain conditions not exactly known, result in infection—probably the duration of the required exposure is proportionate to the numbers of the required microbes and to the resisting power of the individual; (*d*) that possibly plague may be communicated by infected clothing and other articles." In the same connexion he further observes: "I am unable to avoid the conclusion that infection occurs by inhaling the microbes when in close proximity to the sufferer, or in any place the air of which contains them in certain numbers." It is true that people who live under good hygienic conditions—even in plague hospitals where microbes must be present in the air of the wards—habitually escape the disease, but that may be either because fresh air, light, and cleanliness impair the potency of the germs or else because people so circumstanced "possess a certain power of resistance to infection." Surgeon-General Bainbridge does not believe in cutaneous inoculation as a common mode of infection, and with regard to the influence on the disease of climate and season he observes: "There seems no reason to suppose that, given the present sanitary conditions, plague may not originate and, if uncontrolled, spread in India at any season of the year, though certain climatic conditions may be more favourable than others to its development." That rats play an active part in carrying the plague from one part of a town to another he considers "fairly certain," but there is no proof that these animals infect human beings directly. The matter requires further elucidation, and the possibility of the plague germs being disseminated by means of soil carried on shoes, sandals, or even on bare feet, is also a point which should be determined. As may be supposed, the question of prophylaxis is dealt with at considerable length. The success of preventive measures depended entirely upon "the thoroughness and intelligence with which they were carried out by the individual officials concerned," but wherever these essentials were forthcoming the results were most satisfactory. The author looks upon the inspection of passengers at railway stations as a futile means of repression, calculated to effect a minimum of good in return for a maximum of trouble and expense. His sheet anchor is detention, with segregation of all arrivals from infected places, and, since the disease "almost invariably declares itself by symptoms within the fourth or fifth day from infection," the duration of the quarantine need never exceed ten days. The best way of dealing with localised outbreaks is by prompt evacuation. Referring to the Nussurpuri Camp, Surgeon-General Bainbridge is able to assert that "the mere removal of these people to a healthy place and wholesome environments sufficed, with imperfect measures of sanitary police, to stay an epidemic which would almost certainly have been extremely severe had they remained in their very unhealthy and overcrowded houses."

STREET HAWKING BY CHILDREN.

AT the meeting of the Manchester City Council on Sept. 7th a report from the Watch Committee dealing with the question of street trading or hawking by children and providing in the interests of the children for its supervision and control was unanimously adopted. There is plenty of evidence as to the demoralising tendency of this practice. The chief constable said that "street hawking in the centre of the city has a great tendency to lead boys to become thieves, loafers, and disorderly persons," and that the girls were led into degraded habits and eventually to utter ruin. "In the case of twenty-one girls, previously hawkers, all had taken to an evil life, and eight of them had become thieves in addition." Most of the children are the victims of their parents' vices. The chief constable reported that "in thirty-seven homes where boy hawkers lived in only one were sober parents found, in the remaining thirty-six either one was a drunkard or both." Powers are sought like those already possessed by Liverpool by which licences can be granted so that some effectual supervision may be exercised over those who obtain them and those found trading without licences can be properly dealt with and cared for. The provisions sought are powers to take a child trading without a licence or contravening its

regulations into custody without a warrant and to convey such child to a place of safety till he or she can be brought before a magistrate, who, if he is satisfied that the child has no proper home or that the parents are not fit custodians, will be able to commit such child in charge to some fit relative or other person named by the court until the attainment of the age of sixteen years or some shorter period, or to send the child to an industrial school or to suitable lodgings provided by the corporation. In no case, however, should the child even for the briefest detention be taken to a police-station or to a workhouse. Most probably arrangements can be made with the officers of the "Prevention of Cruelty Homes," or with that admirable institution the Boys' and Girls' Refuge in Strangeways. Almost anything would be better than the present state of things, which probably exists in London as well as Manchester. The nuisance caused by newspaper and race-card hawkers is intolerable. If licences were made obligatory they would get rid of the idle and vicious while the respectable hawkers would not be interfered with.

THE PATHOLOGY OF HERPES ZOSTER: "ABERRANT VESICLES."

HERPES ZOSTER should not be regarded as a disease of the skin but as a manifestation of disease of the nervous system —localised neuritis—which affects usually the posterior root and ganglion of a spinal nerve. But what is the cause of this neuritis? The etiology of herpes zoster has long been a moot subject. The most satisfactory hypothesis seems to be Landouzy's—that it is of infectious origin. Its definite course, occasional epidemic prevalence, and the immunity conferred by one attack support this view. Moreover, it may occur in known infections—tuberculosis, pneumonia, and syphilis, and (very rarely, it is true) in other exanthemata. In the *Revue de Médecine*, 1891, Adenot published a case in which zona developed in the tract of the radial nerve during measles. In THE LANCET, Dec. 26th, 1896, Dr. Maurice Paul published a case in which an attack of typhoid fever was ushered in by an outbreak of herpes zoster in the segmental area of distribution of the twelfth dorsal nerve. The neuritis probably is a toxic effect, and its localisation doubtless results from a diminished power of resistance of the affected nerve. That a general intoxication can produce this localised effect is proved by cases of arsenical herpes zoster. But the neuritis does not necessarily affect the root and it is not necessarily of infectious origin. Peripheral neuritis of traumatic origin—for example, pressure of an aneurysm on a nerve trunk—may give rise to herpes zoster. The most characteristic feature of herpes zoster is the distribution of the lesions according to cutaneous nerves or nerve roots. At a recent meeting of the Société Médicale des Hôpitaux M. Jeanselme and M. Leredde contributed a paper entitled "The Aberrant Vesicles of Zona." They state that in a number of cases careful examination shows disseminated over the entire cutaneous surface isolated vesicles quite similar to those of the zoster eruption. In 1888 M. Boulland published a case from the practice of M. Brissaud, and in 1893 M. Tenneson carefully studied the subject and stated that if the entire skin of patients affected with typical herpes zoster were examined every day these "aberrant vesicles" would be found nine times out of ten distributed irregularly at great distances from one another on all parts of the body. This statement by a well-known dermatologist is, to say the least, startling, for these vesicles have never been observed, as far as we know, in this country. Though described as similar to the ordinary zona vesicles they do not appear to be usually accompanied by pain, as they remain unnoticed if not looked for. At the next meeting of the society Dr. Giraudeau read notes of two other cases. A man had well-marked lumbo-femoral zona accompanied by malaise, anorexia, and fever. As the zona eruption was completing its development there appeared about thirty lesions over the whole body. Some were small papules, others were excoriated papules, and others were vesicles; some were isolated, and others were united in groups of two or three. There were three or four on the scalp, three or four on the face, ten on the back, and two or three on each upper limb. The erratic eruption was the seat of pains localised to the papules or vesicles but not propagated in the course of the nerves. M. Jeanselme and M. Leredde think that these aberrant vesicles bear out M. Landouzy's hypothesis. They certainly are evidence of the existence of a general and not merely local malady.

OFFICIAL INDEX TO THE REPORT OF THE VACCINATION COMMISSION.

THOSE who are acquainted with the ponderous blue-books containing the minutes of evidence, reports, and appendices which form the standing memorial of the seven years' labour of the Royal Commission on Vaccination cannot fail to have appreciated the excellent and compendious indexes which are affixed to the first four volumes of evidence and to have experienced keen disappointment at the absence of any such guide to the contents of the fifth volume and to the Final Report. This defect has been partially and somewhat tardily remedied by the issue of an index (obtainable from Messrs. Eyre and Spottiswoode, price 9*d*.) to the Final Report, compiled in the Medical Department of the Local Government Board. The index is strictly confined to the Report itself and does not include the lengthy Statement of the Dissentient Commissioners, whilst the bulky fifth volume of evidence still lacks this essential complement. However, students of the subject will be thankful to have their labours lightened by this instalment, which is admirably executed and embraces every one of the numerous points commented on in the Report. It shows, too, at a glance how wide was the field surveyed by the Commission and how thoroughly every subject material to the inquiry was handled by it.

SANITARY ADMINISTRATION IN PORTSMOUTH.

THE borough of Portsmouth had in the middle of 1897 an estimated population of some 182,585, and this fact, together with the importance of the town in other respects, is such as to justify its setting an example to smaller aggregations of people in the south of England as to sanitary equipment and administration. Unfortunately, this is apparently not the view taken by the town council of its duty, and some of the conditions revealed by Dr. A. M. Fraser in his last annual report are by no means "model." The isolation accommodation of the borough is presumably very deficient, and considerable difficulty has been experienced in preventing overcrowding of the wards; indeed, Dr. Frase reports that the accommodation is so small that it is often impossible to allow the proper amount of air space per bed. In a word the "accommodation is quite inadequate to the needs of the borough." We are glad to see that the medical superintendent refuses to allow overcrowding of the wards in order to admit more patients. Sanitary authorities have certainly no right to use moral suasion to bring patients to hospital and then to jeopardise their chance of recovery by overcrowding them. There is, too, a lack of "observation wards" at the hospital, and those who are familiar with the administration of fever hospitals know what unnecessary risks such absence entails. In the matter of house drainage and buildings by-laws, too, the sanitary authority seems on the horns of a dilemma. In consequence of a representation made recently to the town council by Dr. Fraser as to the absurd practice by which the Health Department was never consulted as to the drainage of a new house,

although that department was responsible for the drainage of every inhabited house, it was apparently resolved to bring into operation Section 24 of the Portsmouth Corporation Act, which enacts that "No new house shall be occupied until certified by the medical officer of health and borough engineer to be in every respect fit for occupation." The sanitary authority was, however, not yet out of the wood, for the borough engineer declined to certify that any house built under the by-laws then in force in the borough was necessarily fit for occupation! It would be certainly difficult, as Dr. Fraser observes, to bring forward a stronger argument for amending the old and obsolete by-laws of 1869 than that a house built in accordance with them should "be actually unfit to live in." We cordially endorse Dr. Fraser's wish that the end of 1898 may see this discreditable state of affairs remedied.

SAD MISADVENTURE WITH STRYCHNIA.

A MELANCHOLY incident occurred on Sept. 15th at the small village of Great Budworth, between Northwich and Warrington, in Cheshire. Dr. Gilbert Love, who is in practice there, had gone for a holiday, leaving Dr. W. Howard Clark as his locum tenent, and on the date mentioned this gentleman, who had been in the village about a fortnight, walked from Northwich, a distance of four miles. Arriving home much fatigued, and also suffering from the unwonted heat of the weather, he went into the surgery and afterwards sat down to dinner with Dr. Love's sister-in-law, who was in charge of the house, but before taking anything he complained of feeling cramp all over his body, became unconscious, and died in a few minutes. On the surgery being entered a bottle of strychnine was found on the table, together with a medicine bottle in which was the residue of a draught containing strychnine, gentian, and ammonia. At the inquest, which was held on Sept. 17th, a medical friend of the deceased stated that he had seen him take a similar mixture as a pick-me-up and the evidence showed that between half a grain and three-quarters of a grain of strychnine was found in the stomach. Letters were read in court proving that not long before his death the deceased was in good health and spirits. The jury returned a verdict of "Death from misadventure due to the taking of an overdose of strychnine." Much sympathy will be felt for the friends of Dr. Clark who was twenty-six years of age and graduated as M.B. at Aberdeen University in 1897. The case is an impressive reminder of the need for care in the dispensing of poisons.

THE SALIVARY DIGESTION OF STARCH.

THE digestion of starch is a process which is common to man and all herbivora, for starch is widely distributed in the tissues of plants and constitutes one of their most important constituents, second only to protoplasm and chlorophyll. It is composed of granules, varying considerably in size, from the large, concentrically laminated, oval bodies seen in "tous les mois" and in potatoes, to the minute angular granules in rice. Starch is insoluble in water and consequently to enable it to be absorbed after its entrance into the alimentary canal it is necessary that it should undergo some chemical change. It has long been known that the change in question is its conversion into sugar, which is accomplished in the first place by the ptyalin or diastatic ferment contained in the saliva and subsequently by the action of ferments having a similar action contained in the pancreatic and intestinal juices. The effect of the ferments is the addition of a molecule of water to the starch molecule, by which it is converted from an insoluble substance into a soluble sugar. Dr. Aitchison Robertson has recently undertaken a series of researches on the process of amylolysis by ptyalin in mixed diets which has not hitherto been carefully studied. His results are of considerable interest, since they have a direct bearing on the selection of a proper diet for invalids and infants. There are not a few persons who suffer from amylaceous dyspepsia, and to aid such patients in their digestion of the starches many forms of diastase have been recommended, such as malt, maltine, malt extracts, and taka-diastase, but there are objections to the use of these agents since they interfere with the digestion of the proteids and have a tendency to set free rapidly a large quantity of sugar in the stomach. Dr. Robertson commenced his researches by endeavouring to ascertain the quantity of saliva which he secreted with different articles of diet by weighing them, masticating them, and then instead of swallowing them ejecting and re-weighing each bolus. He found that taking 6 oz. of porridge for breakfast with milk leads to only a small salivary secretion, not amounting to more than 3 or 4 grammes. After eating the porridge, bread, butter, and cold meat to the amount of 5¼ oz. were chewed, and it was found on re-weighing that about 50 grammes of saliva had been secreted. In the interval between breakfast and dinner the quantity of saliva secreted during four and a half hours amounted to from 50 to 60 grammes. During dinner, consisting of 7½ oz. of meat, potatoes, and rice, followed by milk pudding, from 20 to 30 grammes of saliva were secreted. In the interval between dinner and tea there were from 35 to 55 grammes. At tea, which consisted of 2¾ oz. of bread and butter, from 47 to 53 grammes of saliva were added. Between tea and supper from 60 to 70 grammes. Supper consisted of 2¼ oz. of plain bread and butter and 5 grammes of cheese, leading to the secretion of from 40 to 45 grammes of saliva. Between supper and bedtime from 30 to 40 grammes were secreted. The total amount per diem was consequently 400 grammes. He found that rinsing out the mouth with tepid water greatly promotes the flow of saliva, hence tea, though it contains tannin, rarely causes amylaceous dyspepsia, the excess of ptyalin counteracting the action of the tannin. Brandy, whisky, and beer are sialogogues, as also are sweets. Mechanical irritation of the buccal mucous membrane and movement of the jaws as in speaking cause an increase of saliva. Dr. Robertson found that there were considerable daily variations. He made many experiments, for the details of which reference must be made to the original paper in the *Journal of Anatomy and Physiology* (vol. xxxii., p. 615), on the effects of saliva on mixtures of starch with different food constituents and beverages, which is, of course, quite different from the quantity of saliva secreted. Amongst other conclusions he satisfied himself that porridge and milk forms a more digestible compound as far as amylolysis by saliva is concerned than other combinations of oatmeal; that the more broken-down and moist the starch particles are the more rapid and extensive is the amylolysis. Bread in a light and spongy condition is more rapidly acted upon by saliva than when less spongy, though the ultimate digestion is not more complete. Milk has a retarding influence on the salivary digestion of starch in bread, whilst broth has little or no effect. Tea and coffee have an inhibitory influence on amylolysis, but cocoa has little or none. Beer promotes the salivary digestion of starch; alcohols, speaking generally, retard it even in dilute solution, wines appearing to have this influence chiefly owing to their acidity.

THE ENNISCORTHY UNION.

AT the recent Congress of the Royal Institute of Public Health held in Dublin Mr. Thomas Kelly of Enniscorthy read a paper in which he made some reflection upon the pauper nurses employed in the Enniscorthy Workhouse. The

matter came up at a meeting of the Enniscorthy guardians on Sept. 8th and Mr. Kelly was called upon to apologise. This apparently he has not done. Now we know nothing personally of Enniscorthy, still it must be allowed that scandals in connexion with the nursing of paupers by paupers undoubtedly do exist in Ireland and for the matter of that in England and Scotland too. Mr. Kelly was quite right to point them out. Possibly he described them in rather more florid language than the circumstances would warrant, but on this point it is impossible for us to decide. The chairman of the meeting (Mr. H. H. O'Neill) is reported as saying:—

I have no objection to see medical officers paid well if there was a uniform fee or tax, but they get everything they ask. This should no longer exist. The people are getting unfettered, a new era is dawning, liberty is approaching, and we will no longer tolerate in the future what we have tolerated in the past.

If medical officers in Ireland get everything they ask for it is more than they do in England.

THE ASSOCIATION FOR THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

IN drawing attention last week to the formation of a society in the county of Durham having for its object the dissemination of knowledge concerning tuberculous diseases and their prophylaxis we did not perhaps do full justice to the association founded in London this summer, and of which the offices are established at 20, Hanover-square, W. We understand that this association has already enrolled a large number of members, and that steps are being taken to make its objects more widely known by means of a public meeting to be held probably in the course of next month. We have pleasure in publishing the annexed statement of the senior association's objects and views, which clearly shows that the organisation of this association may well claim priority in this laudable enterprise:—

1. OBJECT.—The prevention of tuberculosis.
2. MEMBERSHIP.—The Association consists of ordinary and of life members. The subscription of ordinary members is 5s. annually. Life members give a donation of 5 guineas.
3. METHODS.—I. The education of public opinion and the stimulation of individual initiative by means of—
(a) A central bureau for the collection and distribution of information as to modes of diffusion of tuberculosis and measures of prevention.
(b) The circulation of pamphlets and leaflets setting forth in plain language the results of scientific investigation of the above points.
(c) Public lectures by men approved by the council; addresses at congresses and other public gatherings.
(d) Coöperation with other societies having for their object the promotion of public health.
(e) The coöperation of the public press.
(f) The holding of periodical congresses and the issue of an annual report.
(g) The promotion of the establishment on a self-supporting basis of open-air sanatoria for tuberculous patients.
II. The influencing of Parliament, county councils, boards of guardians, and other public authorities on matters relating to the prevention of tuberculosis.

THE WATER-SUPPLY OF MELBOURNE.

IN a report on the condition of the drinking-water and the necessity for having the waste-pipes from houses disconnected from the drains into which they lead Dr. D. Astley Gresswell, of the Board of Public Health, Victoria, gives an interesting sketch of his efforts to improve the quality of the public water-supply. In 1894 he drew the attention of the Board to the facts that almost throughout that colony the water provided for drinking purposes was directly derived from open catchments, that necessarily it contained a large quantity of organic matter, that in most instances it was open to very gross pollution, that with only rare exceptions it was supplied unfiltered, and that there was a close relationship between impure water and diseases such as diarrhœa, dysentery, typhoid fever, and hydatids. During the past seven years the Board has persistently brought under public notice the need for care as to the condition of the water used for drinking and has strongly recommended the boiling or effective filtration of all such water. Filtration on the premises of the consumers is being more and more adopted, with a corresponding improvement in the quality of the water. This holds more particularly in connexion with the Railway Department, the Education Department, the Government offices, private schools, hotels, coffee palaces, restaurants, factories, and public buildings, while effective filters in large numbers have been affixed to service-pipes supplying private families. At the State School numbered 583, in Punt-road, Melbourne, Mr. W. H. Powell, the head teacher, some time ago, by means of voluntary subscriptions and the proceeds from a concert, had four large-sized Jeffery filters with a 350-gallon iron tank installed at a cost of about £12. Beetles in enormous numbers and snakes in large numbers, as well as rabbits and other animals pass into the conduits and reservoirs from the open catchments and dying give rise to much contamination of the water. Eels also are found in the pipes within the city; Dr. Gresswell has one in his office measuring 33 in. in length and 7 in. in girth. Another cause of pollution is the entrance of foul surface water from the streets into the mains through the fire-plugs. A small fish (Galaxias) has for years been found in large numbers in the mains of the Adelaide Waterworks, and has given rise to numerous complaints owing to blockage of service-pipes and putrefaction of the fish. The appendices to Dr. Gresswell's report include reports on an occurrence of typhoid fever by Dr. Thomas Gray, assistant medical inspector, and Dr. James Jamieson, officer of health of the city of Melbourne.

THE DANGERS OF ICE-MAKING.

THE awful disaster reported from Glasgow must be counted as one amongst the many dangers which a spell of hot weather may bring in its train. The demand for ice has risen by leaps and bounds, and doubtless the increased pressure upon the working capacity of a large freezing machine at an ice works in Glasgow was responsible to some extent for the explosion of the apparatus which ultimately killed three men and injured several others. The freezing plant was constructed on a well-known principle, ammonia being employed as the agent for producing cold by evaporation. In its simplest form the apparatus consists of an iron boiler into which a quantity of a saturated solution of ammonia is placed. On heating the liquid the ammonia gas is driven out of the solution and travels into a receiver where it liquefies under the pressure attained. The heat is then withdrawn and the boiler cooled, when the reverse process takes place. The water absorbs the ammonia, the evaporation of the liquid gas in the receiver produces intense cold and thus converts into ice the water which is placed in it. The process is continuous. Since a saturated solution of ammonia will contain from 600 to 700 times its volume of gas the effect of the bursting of a large machine may be to some extent imagined. In the disaster already referred to there was no fire at all, and the fire-engines which arrived on the scene soon after the explosion were powerless to act, and the crowd which had gathered could not approach the scene on account of the overpowering ammonia gas. It was a long time before a search could be made, but by means of drenching the premises with water and the use of respirators soaked in vinegar a search was at length made and the body of the unfortunate manager was recovered. We presume that the ammonia method affords certain advantages for the purpose, but carbonic acid gas may also be used in a similar way. In the case of explosion, however, the carbonic acid would not be so deadly and overpowering as ammonia gas. This fatal occurrence should emphasise the need of great care

being taken with domestic freezing machines which do their work on the same principle—that is, the alternate expulsion and reabsorption of ammonia. We do not remember a case occurring before, so it may be assumed that the process is fairly safe but that owing to a structural defect or perhaps blocking of the pipes the unfortunate explosion took place.

THE OPENING OF LABORATORIES OF PHYSIOLOGY AND PATHOLOGY AT LIVERPOOL.

IN our issue of Sept. 17th we gave a list of some of those who are to be present at the opening of the new Thompson-Yates Laboratories of Physiology and Pathology, on Saturday, Oct. 8th, at Liverpool. Additional names are those of the Bishop of Liverpool, the Vice-Chancellor of the University of Cambridge, the Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh, and Sir William Turner. At three o'clock Lord Spencer, Chancellor of the Victoria University, will confer the degree of Doctor of Science upon Lord Lister in St. George's Hall, after which at half-past four the laboratories in University College will be formally opened and inspected. After the ceremony tea and coffee will be served at the College.

SECONDARY HÆMORRHAGE FOLLOWING THE REMOVAL OF POST-NASAL ADENOID VEGETATIONS.

IN the *Boston Medical and Surgical Journal*, May 19th, 1898, Dr. W. Preble writes on this very unusual complication. He removed vegetations from a girl aged eleven years. The bleeding was not severe. The operation was quite successful and nasal breathing was restored. But on the seventh day a sudden hæmorrhage occurred and the girl was carried into the house fainting. Under cold syringing the bleeding stopped. It recurred and was stopped by plugging the posterior nares. On the eighth day a sudden gush of blood came on and she died before assistance could be rendered. There was no history of hæmophilia. Dr. Preble has collected 21 cases of serious primary hæmorrhage after this operation (of which 4 proved fatal) and 5 cases of secondary hæmorrhage. Of the latter 3 of the patients were French and 2 were Danish. There does not appear to be any case of secondary hæmorrhage recorded in English literature.

THE TRAVELS OF PROFESSOR KOCH.

UNDER the title of "Reise-Berichte" Professor Koch has published[1] the text of the reports furnished by him from time to time during the eighteen months of his "roving commission" in Africa and India, where he was engaged in investigating the rinderpest, the plague, and malarial and other affections. They form an interesting volume in which the main lines of his inquiries and their results are described with his customary lucidity. Professor Koch was invited by the Cape Government to investigate the rinderpest which had invaded the colony from the districts north of the Zambesi. He arrived at Cape Town on Dec. 1st, 1896, accompanied by his assistant, Dr. Kohlstock. He established himself at Kimberley, in the vicinity of which the rinderpest was rife, and by the end of March, 1897, was well advanced in his laboratory work upon a method of protective inoculation for the disease. He was then requested by the German Government to proceed to Bombay to take charge of a scientific commission which had been despatched thither to investigate bubonic plague. Leaving his work on rinderpest immunisation — already practically complete — in the hands of Dr. Kohlstock and Dr. Turner, the former being subsequently replaced by Dr. Kolle, Professor Koch set out for Bombay. When he arrived on May 1st he found that the German Commission under Professor Gaffky had nearly finished their labours, and by the end of June the Commission returned to Germany. Professor Koch, however, had in accordance with instructions to proceed to German East Africa to investigate a disease resembling plague which had appeared there. Here, he says, he found a rich field for work, and whilst Dr. Zupitza proceeded inland to collect material on the malady in question he busied himself with studies on tropical malaria (which we propose to notice at greater length in a future issue), Texas fever, and the Tsetse or Surra disease of cattle. It was in February, 1898, that he received at Daressalam, where he had established himself, materia which enabled him to declare the cases seen by Dr. Zupitza to be true bubonic plague. His labours were now at an end and on May 20th he returned to Berlin. The reports now published must, he says, be considered for the most part as preliminary to more detailed accounts which he hopes to produce when occasion serves. We fear that the new commission he has received to study malaria may delay the appearance of these more extended writings, and therefore it is all the more satisfactory to have the present accounts of scientific work written at the time when the researches were in progress.

[1] Reise-Berichte über Rinderpest, Bubonenpest in Indien und Afrika, Tsetse oder Surrakrankheit, Texasfieber, Tropische Malaria, Schwarzwasserfieber. Von Robert Koch. Berlin: Verlag von Julius Springer. (Reports on Rinderpest, Bubonic Plague in India and Africa, Tsetse or Surra Disease, Texas Fever, Tropical Malaria, and Blackwater Fever. By Robert Koch. Berlin: Julius Springer.) 1898. Obtainable from F. Bauermeister, foreign bookseller, Glasgow. Price 2s. 9d.

NON-POISONOUS MATCHES.

ONE undoubted way of preventing phosphorus necrosis in match factories would be to eliminate altogether the yellow phosphorus in the manufacture of the match-head. The difficulty is, however, to find a substitute which, like the ordinary phosphorus match-head, will strike anywhere. The safety match will, of course, not do this, the means of producing ignition being the rubber on the box which contains non-poisonous or amorphous phosphorus. In other words, the safety-match tip contains the elements of combustion while the rubber contains the excitant. We are not prepared to admit that the entire adoption of this system would be a source of serious inconvenience to the public. However, several persons, prompted by the publication of the recent cases of phosphorus poisoning in certain match factories, have been seeking for a composition which will do away entirely with the use of poisonous phosphorus while at the same time it will strike anywhere. No quite new direction in the preparation of such a match appears to have been suggested. The published composition of one in particular is the following: chlorate of potash, whitening, plaster of Paris, ground glass, glue, and amorphous phosphorus. There is reason to believe that red or amorphous phosphorus is not poisonous, for a case is recorded in which a dog took as much as 7 oz. in twelve days and remained without showing any signs of being poisoned. The only novelty in the above composition appears to us to be the use of special diluents like whitening and plaster of Paris, which reduce the energy of the otherwise violent action between red phosphorus and chlorate of potash. These latter substances indeed form undiluted a very powerful and dangerous explosive. It is this mixture which is used in toy caps or the French *amorces*. By attenuating the mixture with an inert powder such as whitening it is probably rendered less active and therefore safe, while in the form of a dry match tip it is said to strike anywhere. Now that public opinion has been stirred in this matter it is probable that attention will be given to non-poisonous matches with the view of dispensing with the ordinary yellow phosphorus, the use of which involves unhealthy conditions to the operatives engaged in ordinary match-making. We have ceased

to look upon the match in the light of a luxury as in the flint, steel and tinder days of our forefathers, but the new match must be satisfactory in all points before the public will take kindly to it.

THE MALARIA COMMISSION.

THE Commission for investigating the various questions associated with malaria which has been appointed by the Colonial Office and the Royal Society consists of the following members:—Dr. C. W. Daniels, of British Guiana; Dr. S. R. Christophers, of University College, Liverpool; and Dr. J. W. W. Stephens, John Lucas Walker Student in Pathology in the University of Cambridge. Dr. Christophers and Dr. Stephens will proceed almost immediately to Pavia to work in the laboratory of Professor Golgi and thence to Rome to work in Professor Cetti's laboratory. The Commission will eventually proceed to Africa, when its first work will in all probability be to determine the clinical varieties of malarial fevers occurring there.

LECTURES AND DEMONSTRATIONS FOR SANITARY OFFICERS AND STUDENTS.

A COURSE of lectures has been arranged by the Sanitary Institute for the special instruction of those desirous of obtaining knowledge of the duties of sanitary officers and of other persons desirous of obtaining a practical knowledge of sanitary requirements and regulations. The course will consist of seventeen lectures delivered at the Parkes Museum, Margaret-street, Regent-street, W., and will commence with a free introductory lecture on Oct. 17th. The lectures will be given at 8 P.M. every Monday, Wednesday, and Friday from Oct. 17th to Nov. 25th. The lecturers for October are Sir Douglas Galton, Dr. Louis Parkes, Dr. Herbert Manley, Dr. W. A. Bond, Professor A. Bostock Hill, Dr. J. F. J. Sykes, and Professor W. H. Corfield. Inspections and demonstrations have been arranged in connexion with the lectures, and will include visits to disinfecting stations, dairy premises, municipal depôts, artisans' dwellings, offensive trades, waterworks, common lodging-houses, sanitary works in progress, refuse and sewage disposal works. There will also be demonstrations of meat inspection and diseased meat. The museum of sanitary appliances and the library will be opened free to students attending the course. The fee for the course is £2 2s. Application should be made at once to Mr. E. White Wallis, secretary of the Institute, Margaret-street, W.

THE PUBLIC HEALTH ACT AND ENTERIC FEVER.

AT the meeting of the Sanitary Committee of the Louth Town Council, held on Sept. 8th, the sanitary inspector reported that on August 26th Mr. G. Briggs had been notified by Mr. G. Gresswell as suffering from enteric fever and that the said Mr. G. Briggs had on Sept. 3rd wilfully exposed himself while suffering from a dangerous and infectious disease without taking proper precautions against the spread of infection in certain streets of the town. It was resolved that proceedings should be taken under Section 126 of the Public Health Act of 1875 against Mr. Briggs. At a monthly meeting of the town council, held on Sept. 13th, this report of the committee was submitted for confirmation and a long discussion arose about the above-mentioned case. Dr. Best, a member of the town council, said that in his opinion it was dangerous to be in a railway compartment with a person suffering from typhoid fever. The medical officer of health said that Dr. Albert Gresswell had told him that there was no doubt about the diagnosis. On the other hand, the Mayor said that Mr. George Gresswell had written and said that there was no danger in the man being out and that Dr. Albert Gresswell had called upon him (the Mayor) and had said the same thing. Therefore he thought that if they prosecuted Mr. Briggs the magistrates would not convict. Eventually the matter was referred back to the committee. We should say that Mr. Briggs probably did a great deal more harm by going out to himself than to anyone else. For all that, a person going about whilst suffering from typhoid fever is undoubtedly a potential source of infection and it should be made plain that "exposure" in the sense of Section 126 of the Public Health Act of 1875 is illegal and should be punished. The danger, of course, of spreading infection is infinitely less in a case of typhoid fever than in scarlet fever or typhus fever, but it exists for all that.

HEALTH RESORTS AND INFECTIOUS DISEASE.

THE public of Great Britain, and doubtless to a greater degree the public of other countries, still betray an almost criminal slackness as to the sanitary conditions, equipment, and administration of the "health resorts" to which each recurring summer the holiday-makers betake themselves. Business men who, as members of their urban or rural district councils, have, or ought to have, sanitary matters constantly before them, give not a thought to the drainage, the water-supply, or the isolation accommodation of the "health resorts" to which at no small expense they send their wives and their children. Much less do they take the trouble to ascertain whether infectious diseases may be prevalent in the locality, or if, perchance, the previous occupants of the room or lodgings have suffered from such diseases. What a reform might be brought about in the sanitation of many of our so-called "health resorts" if, before selecting his annual camping-ground, the head of the family were to ask for certain information from the local medical officer of health. Even if this course did not commend itself to him he might, as Dr. Niven points out in his recent quarterly report on the health of Manchester, consult the Registrar-General's quarterly return for information as to the deaths from infectious disease in each of the principal watering-places of Great Britain, and thus avoid localities where these diseases have been recently prevalent. If parents will not take these very elementary and easy precautions they must be prepared at times to pay the penalty of their negligence.

THE VENTILATION AND WARMING OF DORMITORIES, WORKSHOPS, ETC.

AN important report to the Local Government Board has recently been issued in the form of a blue-book on this subject. The inquiry, which was obviously a practical one, was undertaken by Mr. W. N. Shaw, M.A., F.R.S., Lecturer in Experimental Physics in the University of Cambridge. The object of the inquiry was to ascertain whether, where improvements were found to be necessary, they could be carried out in such form that general principles might be laid down applying to the various requirements to which the guardians or managers to whom the schools belong might give effect with the assistance of their respective architects. The observations referred to dormitories, workshops, and other rooms in certain of the Metropolitan Poor-law schools. The appendices contain details of calculations and full particulars and notes as to dimensions, aspects, &c., of the rooms indicated. The report suggests not only the need of improvement and attention to provisions already made, but the possibility of applying better principles without any serious structural alterations. The recommendations in many instances are extremely simple; in other cases it is remarked that ordinary

provisions, simple though they may be, are very often ignored. Mr. Shaw incidentally refers in the section on Infirmaries to our own inquiry into the plenum system of ventilation which is now in practice at the General Hospital, Birmingham.[1] Speaking of this system he says that it has had its failures and also its successes, but assuming that the building is under careful supervision by an architect and engineer of repute a very successful result would seem certain, "and it is probable that some form of the mechanical system will be extensively used in the future." The bulk of the report, however, relates more to the requirements and existing conditions of the metropolitan Poor-law schools than to buildings on the scale of a hospital or infirmary. New schemes of ventilation and warming can only be adequately applied to new buildings or buildings in course of construction, but Mr. Shaw's report contains a mass of material which should be a useful guide to many who have to contend with archaic buildings, and therefore with all sorts of structural obstacles in attempting to make any system of ventilation and warming satisfactory.

THE first annual dinner of the North-West London Clinical Society will take place on Thursday, Oct. 27th, at the Café Royal, Regent-street, at 7.30 P.M. The President, Mr. Victor Horsley, F.R.S., will take the chair and will give the annual address, on "The Rational Treatment of Goitre," at 6.30 P.M. at the same place.

AN interesting link with the past has been severed by the death last Saturday, at the great age of ninety-five years, of Mr. John Lettsom Elliot, the "father" of the Athenæum Club. He was the grandson of Dr. Lettsom, the founder of the Medical Society of London, and one of the original group of members of the Athenæum.

THE introductory lecture at the opening of the session of the Royal Veterinary College will be delivered by Professor Shave, F.R.C.V.S., on Monday, Oct. 3rd, at 1 P.M. The chair will be taken by Major-General Sir Henry Ewart, K.C.B.

SIR JOSEPH EWART, M.D. St. And., has declined the invitation of the Liberal party in Brighton to be their candidate for Parliament at the next election.

SOME EXPERIENCES OF AN AUSTRALIAN COUNTRY GENERAL PRACTITIONER.

BY LEONARD W. BICKLE, M.R.C.S. ENG., L.R.C.P. LOND., F.R.C.S. EDIN.

JUST after having completed arrangements to take up life in Adelaide, the capital of South Australia, after many years' experience as a country practitioner, I have jotted down short notes of some of the more important surgical cases which have been under my care. These notes will serve to show that successful surgical work can be undertaken in the country without the appliances of any hospital, but I am bound to admit that the anxiety and fatigue entailed is far beyond the remuneration obtainable. All the amputations (and four of them were in men over sixty-five years of age) were done with the simple assistance of one other medical man to give the anæsthetic and my groom as dresser. One cholecystotomy was performed single-handed with only the help of a village untrained nurse, and a cholecystectomy with the help of one qualified man and a fourth year's student in addition to my groom to hand the instruments. When home on a visit to the old country last year I was asked by more than one old friend to publish brief notes of some of my cases, and it is on their suggestions that I have drawn up this paper. In three cases I had the helpful assistance of a trained nurse, for others the devoted attention of relatives and close friends, and in many others the assistance of the ordinary untrained nurses, who were willing to learn and then act.

[1] See THE LANCET, May 11th, 1895.

Cholecystotomy twice, followed by cholecystectomy on the same patient; recovery.—The patient was a woman about thirty-eight years of age. She had had repeated attacks of gall and renal colic and constant shivering attacks with occasional jaundice and was said to have brought up matter and blood several times with great relief (the vomit was never seen by me). Occasionally a gallstone was felt in the flaccid state of an enlarged gall-bladder, it was not to be felt when the bladder was tense. After a time it was impossible to feel it. A large rounded tumour, reaching to below the level of the umbilicus, was found when next the patient was seen after some months' interval. This moved up and down with the respirations and was so tense as to suggest that it was solid. Her sufferings being now severe and constant an operation was consented to. On opening the abdomen a tense thin-walled cyst was seen. Enough thin opalescent fluid was drawn off to allow the walls to be sewn to the edges of the abdominal incision. The cyst was then freely opened and found to contain another tumour. This was incised and found to be thick-walled and full of pus. At the bottom was found a large gallstone of the size of a small nutmeg. The wall was secured to the skin wound by sutures; after a while the fistula closed and the patient felt comfortable. Symptoms of gallstones recurred and one afternoon I injected cocaine and opened up the scar; another stone was felt, this time just in the duct. Cauticus attempts at dividing the commencement of the duct having failed I gave chloroform and by the help of a bullet forceps and a gimlet succeeded in removing piecemeal the stone, which was rather larger than the former one. The sinus closed. After a while attacks of gall colic recurred. The wound was opened up but no further stone was felt. There was a valve-like growth over the entrance to the duct allowing bile to come in, but obstructing the return flow to the bowel. Scraping this away gave temporary relief. Finally, the fistula kept patent. The constant outflow of bile and mucus was very troublesome. Then blood and matter were often discharged. The condition was miserable in the extreme. The risks were explained to, and accepted by, the patient. On Dec. 4th, 1893, I opened the abdomen below the fistula. No stone could be felt in the duct. The walls of the gall-bladder were greatly thickened (over ½ in.). The bladder was laid open and a probe passed right down the duct. Using this as a guide, the bladder was dissected off the liver and the duct was ligatured and divided. Bile came from the wound for three or four days after the operation and then ceased. The patient made a good recovery. Now (August, 1896) she can do her household work and walk several miles. There is some amount of ventral hernia; with the exception of the trouble required in adjusting the belt for this, life is as enjoyable as before it was miserable.

AMPUTATIONS.

1. *Through the knee-joint; recovery.*—The patient was a man, aged seventy years. He was seen in consultation, suffering from a compound fracture below the knee caused by a kick from a horse. There was uncontrollable hæmorrhage. The patient had never made a will; we had therefore to act as lawyers before proceeding with the operation. At 1 A.M. in the small cottage bedroom and by the light of a kerosene lamp and candle I amputated through the knee, which was partially ankylosed from rheumatism. The patella was excised for fear of prolonging the operation too long at that age by sawing through it. The popliteal artery stood out like a pipe stem from atheromatous changes. The patient was out and about in less than one month after. There was no secondary hæmorrhage.

2. *Circular through the lower one-third of thigh.*—The patient was a man, aged sixty-five years. He had been bedridden for three years with a huge ulcer of the leg exposing several inches of tibia and fibula. The patient was in the habit of cauterising the growth with a red-hot poker. The skin was affected above the knee, hence operation so high up at that age. It was dressed with iodoform and vaseline on lint and salicylic wool. Union was by first intention. Sixteen days after the operation the drainage holes were so far healed that no further visits were paid.

The patient died from cystitis some years after. In this case I had the assistance of a trained nurse.

3. *Osteo-myelitis of the tibia; ? metastasis; amputation through the lower one-third of thigh; lardaceous changes; albuminuria; recovery.*—The patient was a girl, aged ten years. The child had been kicked on the shin by a schoolfellow when she was suffering at the time from cold. When seen next day there were fever, cough, pneumonic expectoration, tubular breathing, and fine crepitation and dulness over the upper half of the left lung. There was a tender spot on the skin. Two days later the lung signs had all cleared. The leg was very tender and there was a localised swelling. Chloroform was given and an incision was made down to the bone; puriform fluid with oil globules escaped. The condition extended and numerous free incisions were made under chloroform two days after. The whole shaft of the tibia was necrosed. The question of removing it entire through the periosteum was debated, but friends would not consent. The patient was going downhill; amputation was refused. Quite half the tibia was removed as a sequestrum. Both knee- and ankle-joints were involved. With albuminuria present and the condition desperate friends consented to amputation. I amputated through the lower third of the thigh by oval skin-flaps and circular division of muscles. For twenty-four hours the patient hovered between life and death, only kept up by nutrient enemata; then youth prevailed. On the twelfth day after the amputation the patient was well enough to be out on a couch and dressed, union having taken place by first intention. There was no rise of temperature, although the operation was performed in the room saturated with the effluvium of bone pus for weeks. The dressings were of iodoform and salicylic wool. The albumin cleared away and the patient is now well and strong.

4. *Amputation of the forearm.*—The patient was a man, aged sixty-seven years. The hand above the wrist was mangled off by a chaff-cutter. The patient was seen on a cottage sofa in a small room. As I pulled out the sofa it collapsed, so a box was hurriedly brought in from a small shop near and the couch was propped up. I performed the amputation kneeling. The medical man who gave chloroform was one of the old school and had not seen a drainage-tube used; he thought it would act as a *foreign body*. Now, ten years later, the modern (?) idea is to use a drain-tube as little as possible for the very reason given by my esteemed old friend. Union was by first intention.

5. *Disease of the metacarpo-phalangeal joint in the left index finger.*—The patient was sixty-one years of age, the subject of chronic fibroid phthisis. The finger and half the metacarpal bone were removed. Union was by first intention. There was no recurrence of the disease in any other joint.

6. *Amputation of the breast.*—The patient was a very stout woman, aged about fifty years, with a cystic sarcoma. There was some slight suppuration in the centre; the other parts healed by first intention. Four years later the scar was freely moveable; there was no thickening. The patient is now well.

7. *Amputation of the cervix uteri.*—The patient was a married woman, aged about fifty years. She had had no children, but had had one early miscarriage in the first year of married life. Conical cervix with pin-hole os projected from the vulva; it was removed by Paquelin's cautery. There was a long-standing history of spinal trouble. Beyond relief from removal of the protruding cervix no other benefit followed operation.

OVARIOTOMY.

The patient had a large multilocular tumour apparently of the right ovary, a tense cyst projecting into Douglas's pouch—fixed on vaginal examination. At operation the tumour was found to be of the left ovary twisted on itself. The right was small but cystic and firmly adherent to the under surface of the upper cyst. On reducing the size of the lowest cyst by tapping the adhesions between it and the pelvis were separated with rather free hæmorrhage. Several inches of bowel were adherent to the upper and larger cyst and were dissected off with care. A glass drainage tube was used. The rest of the wound was closed by silkworm gut and silk sutures. The pedicle was tied by a Staffordshire knot. The right ovary and tube were also removed. On the fourth day after the operation the opening for the drainage tube (which closed directly the tube was removed on the second day) burst open and the patient and nurse were both alarmed. The noise of air passing in and out was like the breathing through a tracheotomy tube. After this recovery was uneventful. She went to her home on the twenty-eighth day. She now rides horseback with comfort. There is no trace of hernia. The abdominal wound was supported with broad strips of window plaster. Menstruation came on four days after the operation. Although both ovaries were removed it has continued regularly and painlessly every month since from a portion of the tube or third ovary. In this case I was well off for assistance, three other medical men being present. (I also had the assistance of a trained nurse, who was most unremitting in her care.)

GUNSHOT WOUNDS.

1. *Right lung.*—The patient was a youth, aged about sixteen years, who received the whole charge of a muzzle-loading shot gun in the back, the gun being only a few feet away. When seen he was in a pitiable condition. There was a large hole in the back capable of admitting two or three fingers. There were numerous small holes around. No attempt was made to find the depth of those to the left of the spine. There was much general emphysema; breathing was very laboured. His distress was relieved by small doses of morphia and he gradually came round. The lung expanded again. The patient was very indiscreet; three weeks after the accident he completely disobeyed instructions. The result was a rigor and pneumonia of the injured lung. Effusion followed. He was tapped several times; then the fluid became purulent. A portion of rib was excised for free drainage. He recovered and is able to do ordinary work. There is a lower scar at the site of operation which still discharges at times. Roentgen rays will be used at the first opportunity. A few shot are to be felt under the skin over the front of the right chest; these cause no inconvenience and are therefore left.

2. *Left wrist; medico-legal aspect of case.*—The patient declared that the gun slipped and went off in the fall. On the flexor surface of the wrist was a clean-cut circular wound blackened by powder. On the dorsal surface there was a jagged wound—that of exit. The tip of the right thumb and the end of the nail were blown off. Evidently the patient was leaning with his wrist over the barrel and the tip of the right thumb just overlapping the barrel. The trigger was probably pulled in rubbing one leg against another. The lower end of the radius was blown to fragments, thirteen pieces of various sizes being removed and upwards of sixty shot. The patient was very troublesome. He had two or three attacks of secondary hæmorrhage but eventually recovered.

HERNIOTOMY.

The patient was a woman, over eighty years of age, suffering from strangulated umbilical hernia. She was seen late in consultation one Saturday night. There was a history of strangulation from the Thursday morning previously. Pain had ceased half an hour before my arrival. On the off chance operation was proceeded with. A small knuckle of bowel was tightly strangled. The orifice was nicked and the opening was enlarged. The bowel was not quite dead, as it changed colour a little on releasing the strangulation. The patient died on the Monday; from the report given by the gentleman in charge of the case she seems to have quietly sunk away.

NEPHROLITHOTOMY.

The patient was a man aged fifty-five years. He was first seen in September, 1891. There was a history of some years of pain in the left side, which was worse after exertion. He was much troubled by a localised belt of sweating around the level of the left kidney. The patient looked like a sufferer from chronic Bright's disease. His urine was clear, with a slight amount of albumin. Microscopic examination revealed pus cells and crystals of oxalate of lime. He had never had any hæmaturia. The diagnosis was an oxalate stone in the left kidney. Lithia and other palliative treatment relieved him for a while. In 1894 he had a sharp attack of hæmaturia. Operation was always deprecated from the patient's general despondency—a bad subject for any surgical interference. In 1896 treatment seemed utterly useless and operation was to be risked. On August 6th, 1896, with the kind assistance of Mr. Morier and Mr. Weld, I cut down on the left kidney. The stone could not be felt with the fingers, but I struck it with a mounted needle. The

kidney was incised and the wound was plugged and enlarged with the finger and the stone grasped with cyst forceps and extracted by rotatory movement. Hæmorrhage was very free and the wound was plugged. For two weeks his condition was desperate. Some urinary infiltration of tissue of the back necessitated opening and draining the abscess. Mentally the patient was very queer till the seventeenth day, when he became completely himself again. The temperature was under 98° F. for the first three days after operation. A small oxalate of lime stone about 1 grain was passed *per urethram* eight days after the operation. The stone removed was a large mulberry calculus of oxalate of lime weighing 241 grains. (In this case I had the assistance of a trained nurse, who was most efficient and assiduous in her care of the patient.)

TRAUMATIC ABSCESS OF THE LIVER.

The patient, a middle-aged man, was kicked on the front of the left chest by a horse. The upper ribs were comminuted and pneumonia with effusion followed. He complained of great pain, too, over the liver. This was enlarged. The chest had to be aspirated three times, clear serum fluid being obtained each time. The enlargement of the liver becoming greater and more painful a teacupful of pus was drawn off by the aspirator; great relief followed. The pus did not reaccumulate and recovery was complete.

EPITHELIOMA.

The patient was a man, aged seventy-one years, with a very large epithelioma. He had been under the care of a woman quack. I had to remove more than half the lip. A new lip was made by bringing up the flaps from both sides of the centre of the chin and the gap was filled in by others taken from the skin of the neck below. Union was by first intention. The patient was most excitable. Over a pound of chloroform and nearly half a pound of ether were used at the operation and then anæsthesia was not complete. The epithelioma recurred twelve months later, but the patient was capsized from his cart and fortunately saved much suffering, his injuries proving fatal. Some smaller ones of the lip have been done with nothing noteworthy.

Epithelioma of the neck.—The position was unusual. The growth was freely excised; there has been no return so far and operation was performed three years since.

Epithelioma of the dorsum of the hand.—This was small; it was excised; there was no return. The patient was a married woman; her husband had a small growth on the lip removed. Both were done under cocaine.

LUXATIO ERECTA.

A man was going home in a cart drunk. The cart capsized, the horse in some way becoming freed. The patient was found under the cart with the right arm extended above the head. The head of the bone was in the axilla. I had to give chloroform single-handed and reduce with only a woman to help. The first attempt at reduction converted the dislocation into a subcoracoid and this was readily reduced by right-angled traction. Despite the length of time (as he was not discovered till morning) no injury occurred and the arm is as useful as ever. The rarity of this form of dislocation is the reason for noting it. I have seen numerous others with no special features. One had paralysis of the deltoid. The reduction in this case was wonderfully easy. The circumflex was injured in the fall.

EMPYEMATA.

1. The patient was a middle-aged medical man. When suffering from bronchial catarrh returning from a country journey one wet night his buggy was capsized turning a corner. His wife was with him instead of his groom, hence much more exertion and exposure were caused, no one being about at the time. Next day pneumonia set in. Both lungs were affected. Evidently there was fluid at the left base. Aspirating, I removed nearly a pint of laudable pus. Fortunately this did not reaccumulate. He has been practising for the eleven years following the use of the aspirator. All other empyemata have had to be treated by free incision with or without resection of the ribs. Those requiring removal of rib are referred to in gunshot cases and hydatid cases. In other cases there was nothing noticeable.

2. A boy, about ten years of age, was seen in consultation. He had recently suffered from acute pneumonia; he was going back—high temperature, sweating, &c., and signs of fluid in the right pleura. A large amount of pus was evacuated by the aspirator. Ten days later he was seen again and it was decided to try tapping once more. About the same amount of pus was removed. When asked to see him again two weeks later his distress was extreme. The right pleura was so full of fluid that the heart was displaced below the ribs. Chloroform was given, and with a fine trocar pus was allowed to flow slowly out. I was afraid that sudden relief from free incision would cause fatal syncope. Tension being thus reduced the chest was freely opened. Drainage-tubes were inserted. The boy made a good recovery. The cavity was sweet throughout. No washing-out was employed. Iodoform and salicylic wool dressings were used. Twelve months later the boy came under my care again with the same signs of fluid in the right side. A preliminary tapping showing pus, the chest was freely opened through the old incision. The boy made a good recovery and the last time I saw him he was actively engaged in playing football.

WOUND OF THE KNEE-JOINT.

A young man whilst engaged in barking missed his stroke and the tomahawk cut into the left knee-joint exposing the inner condyle of the femur. Synovial fluid was freely escaping. The wound was carefully cleaned with carbolic lotion and four stitches were inserted. The wound was dressed with iodoform and vaseline on lint with salicylic wool. A back splint was applied and the patient was kept in bed. On the fifth day the wound was dressed and the stitches were removed. Healing was by first intention. On the seventh day the patient was up and about and the knee was as good as ever.

COMPOUND FRACTURES.

Of these I shall only refer to three, the others having no special features.

1. *Comminuted fracture of the fibula, with compound dislocation of the ankle; fracture of the lower end of the tibia.*—The patient was a young woman. In attempting to mount her horse by herself she fell and sustained the above injuries. Reduction was easily effected under chloroform. Cellulitis followed, necessitating free incisions and drainage. More than six weeks after the injury there was no attempt at the formation of callus and it looked as if the amputation the friends thought inevitable at the first would have to be resorted to. Two weeks later there was evident repair going on. Then occurred an alarm of fire at night. The shock given to the patient caused plugging of the veins of the sound limb. This condition occasioned the greatest trouble both in the immediate and the remote stages of treatment. Several sequestrotomies were necessary, and one sequestrum removed consisted of the whole of the articular surface of the tibia. Bony union at the tibio-astragaloid joint occurred, but after nearly five months' confinement to bed the joints between the astragalus and scaphoid and os calcis and cuboid were quite freely moveable and no adhesions were formed. The patient can now walk many miles with ease; ordinarily there is no limp observable. The length of time in this case was greatly lengthened by the effect of the alarm of fire at night. One can scarcely think of any alarm likely to be more productive of harm than that of a fire to a person in bed with a fractured leg in Neville's splints.

2. A boy, aged about sixteen years, was run over by a dray with more than a ton of fireclay on it at the time. To make matters worse the horse stopped with the wheel on the limb, first passing over it and then backing on to it. There was a comminuted fracture of both bones in the centre with the rupture of a large muscular artery. Plugging had to be resorted to to arrest the hæmorrhage. Counter openings were necessary. The patient recovered with a most useful limb. Two or three small sequestra had to be removed subsequently. This would have been a good case for the use of Mr. Lane's screws, but they were not then known, from the oblique nature of the fractures.

3. *Compound fracture of the left innominate bone (iliac portion).*—A young man was thrown out of a cart on to some jagged rock. There was a large rent above Poupart's ligament and the anterior superior spine was broken off and the rim of the bone was generally comminuted. Many broken fragments were taken away. The skin wound was brought together with due attention to drainage. The peritoneum though exposed was fortunately not opened. The bladder being distended the urine was drawn off with a catheter and found to contain much blood. This gradually lessened. No albuminuria was left, the kidney completely recovering from its

injury. The youth was able to resume his ordinary employment.

HYDATIDS.

No one practising in Australia would escape getting cases of this, *the* peculiar disease of two such opposite countries as Australia and Iceland. The district which I have been living in is comparatively free from the scourge, but a few of the cases are worth passing attention.

1. The patient was a young girl, aged ten years. She had a tumour of the size of a small orange in the abdomen just above the bladder. The skin and parietes were freely moveable over it. The tumour itself was somewhat moveable. The tumour was cut down upon and the sac sewn to the edges of the abdominal wound. A drainage-tube was inserted. A mother cyst and many daughter cysts came away as the cavity closed. There was some trouble from retention of urine. The patient made a good recovery and has remained well since.

2. The patient was a woman, aged about thirty years. She had a large tumour of the abdomen, considered to be ovarian. This diagnosis was concurred in by such authorities as the late Dr. Davies Thomas, Dr. Gardner (now of Melbourne), Dr. Stirling, Dr. Way, and all who saw the case. Not having any conveniences at that time the patient was sent to Adelaide. Dr. Way operated. I was present at the time. The tumour turned out to be a huge hydatid. This case is mentioned to show how possible it is to make a mistake in the diagnosis of abdominal tumours. Recovery was good.

3. This patient was a child, aged ten years, with recurrent hydatid of the liver. More room being required, a portion of rib was excised. In this case the pleura was opened. The patient did very well for some days and then pneumothorax set in. There was a slight amount when seen one afternoon, but I did not anticipate the rapid way in which this increased, as it must have done from the symptoms described. The patient died during the night. This was one of my earliest cases, but in any future case I should certainly insert a tube into the pleural cavity if there were signs of a pneumothorax coming on in the course of convalescence where the pleura had been opened.

4. This patient was a young woman, aged thirty years. She had a history of cough for some time and pain in the right side. There was a crescentic area of dulness, convexity upwards, in the right axilla. The diagnosis was probably hydatid. A hypodermic needle drew off a little clear fluid; there were no hooklets. Ten days later the patient came again. She looked very sallow and wretched. The tumour was projecting from the epigastrium. Immediate operation was advised. Under chloroform I cut down and sewed the edges of the cyst to the abdominal incision. On free incision there was a large quantity of puriform fluid and collapsed hydatid cysts, very offensive. The cavity was washed out with Condy's fluid. Iodoform and vaseline dressing with pads absorbent salicylic wool. No rise of temperature occurred. Recovery was uneventful. The patient has since married and had a family. The fingers could reach to the axilla on the one side and feel the heart thumping against them on the other.

5. The patient was a German, aged sixty-four years, suffering from hydatid of the lung. Diagnosis was confirmed by the aspirator. For various reasons I had to transfer the patient to hospital in Adelaide. He was very averse to operation. A curious mistake was made in this case. Looking up Dr. Davies Thomas's mortality chart the death-rate from fifty to sixty years of age was read as higher than from sixty to seventy years of age. I sent the patient away in the firm conviction that he had a better chance of recovery at sixty-four years of age than he would have had if he were only fifty-four. I believe this materially helped the old man and I did not undeceive him. He recovered.

6. The patient was a married woman who had had several children. There was a history of hydatids coughed up some years since. She had a sharp attack of pneumonia of the right lung. She was under the care of my locum tenent, Dr. Moule. When I first saw the case I found signs of fluid at the base. There was no improvement after a short further course of treatment. The patient was sallow, perspiring freely when asleep—going down hill. She was five and a half months pregnant. Aspiration in the axilla only drew off a little blood. Below the angle of the scapula I struck thick pus. The patient was removed to Mr. Barker's. Chloroform was given, part of the rib was excised, and a large collapsed hydatid cyst presented. Recovery was most wonderfully rapid. She went to full time and was safely delivered of a healthy child.

7. The patient was a married woman with a large tumour of the liver. It was so irregular and the appearance was so bad that malignant disease was considered an equal possibility with hydatid. When seen a second time a small area of the size of a sixpence gave a peculiar thrill. Aspiration drew off a little typical hydatid fluid showing hooklets under the microscope. Two days later under A.C.E. I opened the abdomen and drew off a little fluid to reduce the tension of the distended part of the liver. The cyst was sutured to the abdominal wall and freely opened. The cavity was full of daughter cysts from the size of a pin's head to that of a goose's egg. Several bowlfuls of cysts were taken out by cyst forceps or irrigated away. Ten days after the operation bile began to be discharged and for some weeks enormous quantities of bile came away. As the cavity contracted this lessened and ceased. When last seen there was a small sinus; the patient was then suffering from an intercurrent attack of influenza. Recovery in this case was slow.

DIABETIC COMA; RECOVERY BY ADMINISTERING OXYGEN GAS.

A very interesting case, though hardly a surgical one, was that of an elderly woman seen for the first time one evening in a comatose state. Fortunately, some urine had been left in the chamber and this contained a large quantity of sugar. There being no improvement after some few hours I thought I would try oxygen gas. Her neighbour was the headmaster of the Government school, who was, I knew, studying chemistry. From him I got a flask and some glass tubing and rigged up an arrangement by which I generated O_2 from chlorate of potash and black oxide of manganese, led it through a wash-bottle and brought it to the patient's face by indiarubber tubing. After a while consciousness began to return. Recovery for the time was complete, the patient dying some eight months later from other diabetic complications.

NÆVI.

The patient was a boy, aged two or three years, with a large venous nævus of the right orbit. Ligature was thought to be the most suitable means of treatment and the growth was tied under chloroform by a triple interlocking thread. The thickness of the growth necessitated a second ligature of the stump. The whole then sloughed away. The line of scar took the fold of the lower lid so that absolutely no scar was to be seen except on very close inspection.

Another patient had a very large one over the upper part of the sternum. Ligature resulted most favourably in this case too. Capillary nævi have been treated by nitric acid and ethylate of soda in the usual way.

SEBACEOUS CYSTS OF THE RIGHT LABIUM MAJUS.

Cysts of this kind in this situation are so uncommon that I venture to record the case. A young woman, aged eighteen years, was brought by her mother. Examination revealed two separate cysts in the right labium. They were removed under chloroform and contained the usual contents of sebaceous cysts. Recovery was uneventful.

I must not unduly prolong this already lengthy communication with any general conclusions. The cases recorded may serve to show to some who are impressed with all the assistance and appliances of the modern operating room that much, very much, can be done by a careful attention to detail with very primitive help in the shape of appliances and nursing and with a minimum of qualified assistance. I cannot conclude without a few words in favour of the old-fashioned poultice. In ordinary surgical work undoubtedly there is but little occasion for it. We do not expect nor do we often see pus in operations conducted with proper regard to asepsis and antisepsis. On the other hand, we are called to cases where nothing is so soothing or so cleansing as a well-made and properly-applied poultice. Under its soothing influence the restless patient often drops off to sleep. The chief argument against it is that it is a rapid breeder of bacilli, bacteria, *et hoc genus omne*. This is the true reason of its value. Why does it cleanse a sloughing ulcer or a foul-smelling abscess cavity? Because of its affinity for germs. They transfer themselves from the less attractive body nidus to the warm linseed and meet the fate worthy of their fickleness in the devouring fire which is, of course, the only safe depository for a soiled poultice or dressings.

REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR THE YEAR 1896.[1]

FIRST NOTICE.

THE fact that this voluminous report relates to occurrences making up the medical history of India during 1896 is likely to exercise a somewhat deterrent effect upon the reader in 1898. Looking, however, to the large mass of information which is embodied in it and to the fact that this information has to be collected from all parts of a vast country like India, that it has then to be arranged, compiled, and edited, and that as an official record of the Government these reports have to be accurate and reliable, we presume the delay in their publication is unavoidable; but it naturally takes away any keenness of edge in the interest and appetite of the reader. These reports are, however, by no means a bare record of facts and figures and tabular statements. They are accompanied by a text and commentary of a learned and very useful kind, in which a good deal of reference is made to, and a brief analysis is given of, contemporary medical literature, both foreign and English. It is mainly owing to this fact—apart from the vital statistics and official record of the medical events set forth, which make the reports valuable to the statesman as well as to the medical statist—that these volumes are of interest and practical utility to the professional reader and epidemiologist. A new and excellent map of India is prefixed to the present report, showing a revision of the boundaries of the geographical groups. Section I. deals with the meteorology of the year, which need not detain us long. But meteorology probably holds a much more important relation to the health and well-being of the people of India than it does elsewhere. The regular periodicity of the seasons and, it may even be said, the periodicity stamped upon the character of the diseases, are very notable features of that climate. India is much more dependent than most countries on its rainfall. If there is no monsoon it means famine, and any deficiency even in this respect at once affects the price of food; on the other hand, if the monsoon be excessive it either leads to waterlogging of the soil or to a rise of the level of the subsoil water, with the upward movement and escape of malarial agents (the plasmodium malariæ) from the soil and the concomitant outbreaks or increased prevalence of ague and malarial fevers. The natives of India are for the most part extremely poor; bad ctoops, with increased dearness of food as a consequence, lead to starvation which greatly increases the predisposition to disease and diminishes the chances of recovery in those attacked. All this, however, is more or less obvious.

Section II. deals with the European army of India, and we may say *en passant* that the reader will find that a comparison between this section and that on the native army of India is worth instituting, because it serves to bring out some striking differences in the nature of the diseases to which Europeans and natives respectively are most liable. In 1896, out of a strength of 70,584 European troops there were 1387 admissions to hospital, 94 constantly sick, 14·84 deaths, and an invaliding of 28 per 1000 of strength respectively, the total loss amounting to 43 per 1000, which is a somewhat higher ratio than for previous years. The chief causes of admission were venereal diseases and ague. The former caused 37 per cent. of the total sickness and ague 17 per cent. The chief causes of death were enteric fever and hepatic abscess, but the mortality from ague, dysentery, diarrhœa, hepatic abscess, and enteric fever was lessened in 1896. Still enteric fever caused nearly 43 per cent. of the total deaths and hepatic abscess 8 per cent. The chief causes of invaliding were syphilis and gonorrhœa, debility, tubercle of the lungs, and malarial fever. Table I. of the report gives the ratios of the four commands placed side by side. Bengal has, we are told, the highest mortality from cholera, enteric fever, ague, dysentery, and hepatic abscess; the Punjab the highest from remittent fever, heat-stroke and pneumonia, and the lowest from cholera, small-pox and dysentery; Madras, the lowest from enteric fever, heat-stroke and pneumonia, and Bombay the highest from small-pox. The percentage of enteric fever in the total deaths was greatest in the Punjab, and the percentage of hepatic abscess in Bengal. The total death-rate of Bengal, which was the highest, was not far from being double that of Madras, which was the lowest. Burma, in 1896 was distinguished by the prevalence of influenza, simple continued fever, and hepatitis. Allahabad had a high death-rate attributable to an increase of enteric fever. Among the British infantry the 1st Norfolk Regiment at this station had the highest mortality; it had 93 admissions and 32 deaths from enteric fever. The first epidemic year of influenza in India was 1890, and a table is given of the fluctuations of the disease since that year. The amount of cholera in 1896 among the troops was higher than in 1895, but the ratios were lower than those of the decennium and there was no marked prevalence of the disease; the death-rate from cholera in 1896 was 0·89, as against 0·43 per 1000 in the previous year. The admission-rate for small-pox was nearly six times, and the death-rate nearly five times, as great as in 1895. There were 122 cases of small-pox with 10 deaths in 1896, as against 19 cases and 2 deaths in 1895. The comments and remarks on this disease in relation to vaccination and the importance of successful revaccination are interesting, but these require to be read in detail. As regards fevers it seems to be established that so-called Malta fever occurs in India. The blood-serum of some soldiers invalided to Netley from some Indian stations was found to react specifically with the micrococcus melitensis. By the use of the method of serum diagnosis it has been shown that the true cause of Malta fever is this micrococcus, and there is now, as we have said, reason to believe that the same form of fever prevails in India. The report then proceeds to the discussion of enteric fever—that scourge of the European army in India and the scourge, indeed, of all armies in the field, as among the American troops in Cuba and the British in the Soudan and Egypt for example. We must, however, for the present defer the further consideration of this report.

[1] Annual Report of the Sanitary Commissioner with the Government of India, 1896, with Appendices and Returns of Sickness and Mortality among European Troops and Prisoners in India for the Year. Calcutta: Office of the Superintendent of Government Printing, India. 1898. Price, 5 rupees.

THE OUTBREAK OF TYPHOID FEVER IN BELFAST.

STATISTICS, as reported to a meeting of the Public Health Committee on Sept. 15th, for the week ending Sept. 10th, show that the death-rate from all causes in Belfast was 27·9 and from the principal zymotic diseases 10·8 per 1000. There had been notified during the same period 378 cases of infectious disease as follows: 10 of diphtheria, 6 of erysipelas, 12 of scarlet fever, 1 of typhus fever, 270 of typhoid fever, and 79 of simple or continued fever. In the face of such a high general death-rate and of such an extraordinary mortality from zymotic diseases the citizens of Belfast have been astounded at the action of the Public Health Committee. Instead of boldly facing these appalling facts laid before them by their own medical officer of health they take refuge in a most absurd piece of special pleading. Firstly, they allege that in certain cases there has been an abuse of the Notification of Infectious Diseases Act, owing to the fact that a second medical practitioner has for some reason or other been called in to consult about, or to take charge of, patients whose cases have already been notified, and he in due course also notifies the fact of which the authorities are already aware and thus cases are duplicated. This is possible, but does anyone for a moment believe that such twice-reported cases are so numerous as really to vitiate the general and authoritative statistics? and does not the very fact of such an excuse being put forward show that in the Public Health Office there is no really competent classification of entries of cases reported, otherwise such slips or mistakes would be at once made right? Secondly, instead of taking the proper and effective course of doing away altogether with pigstyes in the city it is coolly proposed to recommend the City Council to amend their by-laws for the regulation of piggeries so as to render compulsory the registration of the establishment of "pig-culture," in order that the officers of the health department may have the same convenience of inspection and control as they have over cowsheds and dairies. Thirdly, the public are told that "numerous

complaints were received as to the offensive smells arising from sewer ventilators, the evident impression being that these gratings were expected to emit vapour with a fragrant bouquet and that the Public Health Committee were responsible for the disappointment." Such sarcasm is altogether out of place. Every one knows that sewer-air must find an outlet somewhere and that ventilating shafts would be an improvement on the present street traps, but what is wrong with these Belfast drains that they require in places constantly to be cleaned out and that after heavy rains it is noticed that the health of the population shows a general improvement? Surely it is evident that they allow a great accumulation of filth which is not properly removed. Public opinion is awakening in Belfast; the articles of the Special Sanitary Commissioner in THE LANCET are being reprinted in the public press of the city and are having a most educating effect; and as an evidence of the present tone of public opinion the following from a Belfast morning paper of Sept. 16th may be quoted:—

> The Public Health Committee will have to go far beyond ingenious suggestions that some typhoid cases are reported twice, recommendations for the registration of pigstyes, or sarcastic hits at various complainants. Few will have the hardihood to deny that the health of the city has been most unsatisfactory or that the citizens have in great degree been reaping to their sorrow what in the past successive town or city councils, improvement committees, or public health committees have sown. It is certainly no pleasure to us to have to repeat this—quite the reverse. We should be sincerely sorry to sound an unnecessary alarmist note or to give countenance to any exaggeration. Nothing could be further from our wishes than any attempt to "blacken the reputation of the city," as an eminent corporator put it at a recent meeting of the City Council. But the methods of the ostrich are, to say the least, of very doubtful wisdom. The reputation of the city is what it was inevitably made by those who in the past permitted the jerry-builder to work his wicked will, who winked at the erection of houses upon vile, filth-sodden, filling-up stuff—of houses to the number of so many thousands without back passages, and with the disgusting and dangerous system of dry privies. The sanitary sins of the past have been finding us out, but unhappily the innocent suffer for the guilty. It is the duty of the City Council and the committees concerned, instead of attempting to minimise the gravity of the situation, to see that these sins and their evil consequences are not perpetuated. They will have their hands more than full inside the city itself, while they will have to very seriously consider the system under which the lough at our doors, so to speak, has been turned from a picturesque expanse of water into "a stinking cesspool." Beginning with themselves, they will have to deal with a more than Draconian severity with all offenders against sanitary laws, making the interests of the public health, not those of any individual, the sole basis of their action. And they will have to see that while the city is so far as possible cleared of the grossest dangers its filth is not merely swept over the threshold to lie and fester and breed disease on the shores of the lough. This may seem indefinite, but the evils have been often defined and the remedies and palliatives often indicated. They will cost money and labour, but the price is nothing in proportion to the good to be gained—improved health for the citizens and a decent sanitary reputation for the city which will not be liable to suffer at every breath of plain and honest criticism.

The City Corporation will meet on Oct. 1st, when it is expected there will be a very lively discussion on the typhoid fever epidemic. It would be as well if the members of that body who feel that the Public Health Department is totally incompetent to deal with the present deplorable sanitary condition of Belfast were to suggest calling in an extern authority such as Dr. Russell, medical officer of health of Glasgow, Sir Richard Thorne, medical officer of the English Local Government Board, or Dr. Niven, medical officer of health of Manchester, to advise what is best to be done so as to remedy the present sadly disgraceful sanitary state of that city.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Report upon the Sanitary Conditions of the Urban District of Alnwick and upon Housing of the Working Classes therein, by Dr. G. S. BUCHANAN.[1]—The County Council of Northumberland in December of last year made representations to the Local Government Board as to certain unwholesome conditions which had been discovered in Alnwick by Dr. Hembrough, the county medical officer of health. The local medical officer of health shared Dr. Hembrough's views, but the district council took no adequate action. The Local Government Board therefore sent down Dr. G. S. Buchanan, who has recently, through this Board, presented the public with a very detailed account of the shortcomings, *quâ* sanitation, of the Alnwick District Council. As long ago as 1852–54 Alnwick was sewered, but in spite of this no diminution in the general mortality rate took place and the phthisis rate remained inordinately high. This fact seems to have disheartened the sanitary authority, and Dr. Buchanan reports that their later administration has been "conspicuously lax." It would appear, indeed, that the local authority have throughout either been devoid of backbone or, what really comes to the same thing, have had a backbone consisting of those interested in insanitary property who neglected to take proper action when unwholesome conditions were brought to their notice. The late Mr. Spear, who inspected this district in 1885, clearly diagnosed the condition from which the sanitary authority suffered when he wrote: "Wherever individual interests have to be opposed, or seemingly opposed, sanitary administration has been paralysed." Evidently, too, Dr. Buchanan found the same conditions obtaining at the date of his recent visit, and in spite of a sewerage system, a public water-supply, and an isolation hospital we find that the poorer classes are shamefully housed and that a large proportion of the dwellings of the town are to be found huddled together on small areas at the back of the main thoroughfares. Dr. Buchanan paints a graphic picture of the manner in which this overcrowding of houses upon areas was gradually brought about. He tells us how the long strip of garden behind the house facing the main thoroughfares was covered by the operations of the jerry builder of former days and how through the ground floor of the front house the passage was knocked which now gives entrance to the alley or court in which are the overcrowded and dilapidated dwellings which he condemns so strongly. Time after time has the attention of the sanitary authority been drawn by the medical officer of health to this crowding of houses upon areas, and as often has the appeal for remedy been passed over, if not in silence at least without adequate action. As instances of extreme overcrowding Dr. Buchanan mentions a single room of barely 1000 cubic feet capacity inhabited by a family of eight, and a six-roomed house sub-let in tenements which was said to be occupied by thirty-one persons. It is, however, some consolation to find towards the end of the report before us that in January last a "Town Improvement Committee" was appointed who really seem bent on putting an end to the state of affairs revealed in turn by the late Sir George Buchanan, by the late Mr. Spear, by successive medical officers of health of Alnwick, by Dr. Hembrough, and now, let us hope finally, by Sir George Buchanan's son. Many of the dwellings here in question are, it appears, beyond remedy and comprehensive action under the Housing of the Working Classes Act seems the only solution of the difficulty. Dr. Buchanan has, however, mapped out the "insanitary areas" for the district council and told them of the death-rates, &c. He has, indeed, done everything but find the money, and even in this direction we may be sure that he will influence the Local Government Board to deal kindly with the authority in the matter of loans.

[1] London: Eyre and Spottiswoode, East Harding-street; Edinburgh: John Menzies and Co.; Dublin: Hodges, Figgis, and Co. Price 3d.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6504 births and 5165 deaths were registered during the week ending Sept. 17th. The annual rate of mortality in these towns, which had increased in the nine preceding weeks from 14·7 to 24·6 per 1000, declined last week to 24·0. In London the rate was 21·2 per 1000, while it averaged 25·9 in the thirty-two provincial towns. The lowest death-rates in these towns were 15·1 in West Ham, 15·8 in Swansea, 16·3 in Croydon, and 16·5 in Portsmouth; the highest rates were 34·8 in Salford, 37·0 in Bolton, 37·2 in Gateshead, and 40·6 in Sunderland. The 5165 deaths in these towns included 1545 which were referred to the principal zymotic diseases, against 1646 and 1578 in the two preceding weeks; of these, 1315 resulted from diarrhœa, 70 from diphtheria, 67 from whooping-cough, 43 from "fever" (principally enteric), 28 from measles, 22 from scarlet fever, and not one from small-pox. The lowest

death-rates from these diseases were recorded in Portsmouth, Plymouth, Swansea, and Birkenhead; and the highest rates in Norwich, Bolton, Salford, Sunderland, and Gateshead. The greatest mortality from measles occurred in Plymouth; from scarlet fever in Huddersfield; from whooping-cough in Preston, Halifax, and Cardiff; and from diarrhœa in Wolverhampton, Norwich, Salford, Bolton, Gateshead, and Sunderland. The 70 deaths from diphtheria included 29 in London, 10 in Leeds, 6 in West Ham, 5 in Manchester, 4 in Swansea, and 3 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns; and only 2 small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday last, Sept. 17th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 2319, against 2178, 2240, and 2300 on the three preceding Saturdays; 242 new cases were admitted during last week, against 182, 238, and 273 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 127 and 130 in the two preceding weeks, further rose to 135 last week, but were 21 below the corrected average. The causes of 54, or 1·1 per cent. of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Newcastle-upon-Tyne, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the four preceding weeks from 18·1 to 23·0 per 1000, declined again to 18·8 during the week ending Sept. 17th, but was 5·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·4 in Edinburgh and 17·0 in Greenock to 19·8 in Glasgow and in Leith, and 20·4 in Perth. The 567 deaths in these towns included 110 which were referred to diarrhœa, 21 to whooping-cough, 9 to "fever," 9 to measles, 5 to diphtheria, and 3 to scarlet fever. In all, 157 deaths resulted from these principal zymotic diseases against 124 and 140 in the two preceding weeks. These 157 deaths were equal to an annual rate of 5·2 per 1000, which was 2·0 per cent. below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 81 and 92 in the two preceding weeks, further rose to 110 last week, of which 49 occurred in Glasgow, 19 in Dundee, and 15 in Edinburgh. The 21 deaths from whooping-cough were within one of the number in the preceding week, and included 7 in Glasgow, 6 in Edinburgh, and 6 in Aberdeen. The fatal cases of measles, which had been 6 and 9 in the two preceding weeks, were again 9 last week, of which 6 occurred in Edinburgh. The 9 deaths referred to different forms of "fever" corresponded with the number in each of the four preceding weeks and included 6 in Glasgow, where 3 of the 5 fatal cases of diphtheria were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 72 and 100 in the two preceding weeks, declined again to 68 last week, and were 28 below the number in the corresponding period of last year. The causes of 22, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 21·8 to 30·7 per 1000 in the four preceding weeks, declined again to 27·1 during the week ending Sept. 17th. During the past four weeks the rate of mortality in the city has averaged 27·0 per 1000, the rate during the same period being 22·0 in London and 18·7 in Edinburgh. The 182 deaths registered in Dublin during the week under notice showed a decline of 24 from the number in the preceding week, and included 35 which were referred to the principal zymotic diseases, against 39 and 54 in the two preceding weeks; of these, 26 resulted from diarrhœa, 4 from whooping-cough, 3 from "fever," 1 from measles, 1 from diphtheria, and not one either from small-pox or scarlet-fever. These 35 deaths were equal to an annual rate of 5·2 per 1000, the zymotic death-rate during the same period being 6·3 in London and 5·3 in Edinburgh. The fatal cases of diarrhœa, which had increased from 4 to 38 in the eight preceding weeks, declined to 26 last week. The 4 deaths from whooping-cough were within 2 of the number recorded in the preceding week. The deaths referred to different forms of "fever," which had been 1 and 5 in the two preceding weeks, declined to 3 last week. The mortality from measles corresponded with that recorded in the preceding week. The 182 deaths in Dublin last week included 52 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in the preceding week. Seven inquest cases and 7 deaths from violence were registered; and 63, or rather more than a third, of the deaths occurred in public institutions. The causes of 12, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

STAFF-SURGEON JOHN SPEARE LAMBERT has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet. The under-mentioned Surgeons have been promoted to the rank of Staff-Surgeon in Her Majesty's Fleet:—Alfred Ernest Weightman, James Walter Octavius Underhill, Charles Hazlitt Upham, Frederick James Burns, Daniel Joseph Patrick McNabb, Charles Strickland, James Mead France, John Menary, Walter Godfrey Axford, George Thomas Broatch, William Bett, Frederick Augustus Brice, John Walter Slaughter, and George Henry Foott.

The following appointments are notified:—Staff-Surgeons: R. M. Young to the *Diadem;* W. Bett to the *Centurion*, for service at Wei-Hai-Wei; C. Strickland to the *Medea;* and J. M. France to the *Briton*. Surgeons: Edward D. J. O'Malley to the *Victory*, additional, for disposal; W. E. Marshall to the *Melita*, additional; N. L. Richards to the *Diadem;* J. C. Durston to the *Wildfire;* and J. W. Bird to the *Impregnable*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel W. H. Macnamara to be Colonel, vice C. F. Pollock, retired. Surgeon-Captain Stacey, Army Medical Reserve, assumes the duties of assistant to the medical officer in charge at Norwich. Major Davidson takes over the medical charge of the Female Hospital, officers, women, and children, at Colchester. Captain Profeit has been granted leave, with permission to go to France and Switzerland. Major Beevor has been appointed Surgeon-Major, Coldstream Guards. The authorities appear to have had to overcome a difficulty in announcing this appointment, for this officer is a major of the Royal Army Medical Corps, but not a major of the Coldstream Guards, which is a purely regimental appointment and title, but he is nevertheless acting as a medical officer of that regiment, so he is called by his rank and title of Major R.A.M.C. and appointed to the post of Surgeon-Major in the Coldstreams.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions in the Indian Medical Service made by the Government of India:—To be Colonel: Brigade-Surgeon-Lieutenant-Colonel William Edward Johnson, Madras Establishment. The Queen has also approved of the retirement from the Service of the under-mentioned officers: *Bengal Establishment:* Colonel Sir George Thomson, K.C.B., Lieutenant-Colonel Joseph O'Brien, and Lieutenant-Colonel Kali Pada Gupta. *Bombay Establishment:* Major Alexander Frederick Ferguson.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major F. F. Moore, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Captain D. Lennox to be Surgeon-Major. Surgeon-Captain R. P. MacKenzie, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 1st Cumberland: Surgeon-Lieutenant R. L. Clark to be Surgeon-Captain. *Rifle:* 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Surgeon-Lieutenant H. A. Rudyard to be Surgeon-Captain. 16th Middlesex (London Irish): Surgeon-Lieutenant E. W. St. V. Ryan to be Surgeon-Captain. 1st (Cumberland)

Volunteer Battalion the Border Regiment: Samuel Braithwaite is re-appointed Surgeon-Lieutenant. 1st Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment): Captain John Nesbitt Patterson resigns his commission, and is appointed Surgeon-Lieutenant. 6th Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant J. Taylor to be Surgeon-Captain.

THE INDIAN MEDICAL SERVICE.

The *Pioneer Mail* of Sept. 2nd announces that a telegram received in Simla states officially that the name of the Indian Medical Service is to remain unchanged. There will thus be no Royal Indian Medical Corps, though the members of the service receive military titles in common with their *confrères* in the now extinct Army Medical Staff. It is premature at present to decide whether this decision will prove satisfactory or not to officers of the Indian Medical Service. That service has fine traditions and a deservedly high reputation and its members may on that account be desirous of retaining its name. On the whole it seems to us, however, that it would have been preferable at the present time to have changed its title to that of the Royal Indian Medical Corps.

THE LATE SPANISH-AMERICAN WAR.

The President of the United States has decided that an investigation shall be made by a committee into the conduct of the War Department during the late hostilities with Spain. Some of the main objects in view are to examine into the conduct of the commissary quartermaster and the medical bureau of the War Department and to ascertain the extent, causes, and treatment of the sickness which prevailed in the field and camps during the late war. The estimated total of those who died from disease is given as 2086, while the estimated total of those attacked by disease was excessive. During the war 279 men were, it is alleged, killed and 1423 wounded.

THE TROOPS IN THE KHYBER PASS.

The health of the troops in the Khyber has been already much benefited by the approach of cooler weather and it is still improving. There is a growing belief in official circles that the Khyber will be taken over by the Government of India.

THE LATE FRONTIER WAR IN INDIA.

In consequence of services rendered during the recent frontier operations a number of promotions in the Subordinate Medical Department of India have taken place.

Captain Robert Frazer Standage, I.M.S., who did such excellent work in the engagement with the Soudanese mutineers near Mruli on April 26th, has been brought to the notice of the authorities. He was appointed Surgeon-Lieutenant in 1895.

Lieutenant Thomas Henry Matthews Clarke, R.A.M.C., who, we regret to learn, was wounded in the recent disturbances in Crete, is twenty-five years of age and was appointed Surgeon-Lieutenant in 1897.

Captain G. T. Rawnsley, R.A.M.C., has been appointed an Esquire of the Order of the Hospital of St. John of Jerusalem in England.

CORPORATE AND MEDICAL REFORM ASSOCIATION AT STAMFORD.—A meeting of the profession of Stamford and the neighbourhood, convened by the medical staff, was held at the Rutland, Lincoln and Stamford Infirmary on Sept. 15th to hear an address by Mr. R. B. Anderson. Mr. William Newman took the chair. Mr. Anderson traced the policy of the association to resolutions of the medical members of the Civil Rights Defence Committee affirming the obligation of the General Medical Council and qualifying corporations to make good the rights by conferring and guaranteeing which (respectively) they exist, an obligation which he described as fully sustained in a series of articles in THE LANCET in 1896. The chairman contrasted the position and influence of the medical profession in the State with the far greater influence and more advantageous position of the sister profession of the law, and after some questions and discussion resolutions were adopted *nem. con.* supporting the principles and policy of the Corporate and Medical Reform Association and appointing a committee to coöperate in promoting its objects in the locality. With votes of thanks to Mr. Anderson and to the chairman for presiding the meeting terminated.

Correspondence.

"Audi alteram partem."

"THE PLAISTOW MATERNITY CHARITY."

To the Editors of THE LANCET.

SIRS,—We are directed by the Executive Council of the East Suburban Medical Protection Society to reply to Mr. Arthur Pritchard's letter in your issue of Sept. 10th. Although not directly challenged by him, and although we are in official correspondence with the committee of the Plaistow Maternity Charity, the council feel that we ought not to leave unrebuked his somewhat ungenerous estimate of our position and motives. If our position had not an element of dignity and our motives of altruism our views would not have found a place in the columns of THE LANCET; while, on the other hand, we should be unworthy members of the healing profession if we refused our advice and assistance to the benevolent in their attempt to provide gratuitous nursing for the sick poor.

Unfortunately this Plaistow Maternity Charity has hitherto been administered by amateurs and certain errors have in consequence arisen. We are immediately concerned with the three following departments of the work: 1 The midwives' practice. 2. The district nursing. 3. The training of nurses. Now, Mr. Pritchard in his letter to you treats these *en masse*, whereas it is essential that they should be treated separately; for the one is in direct opposition to qualified practice and the other two depend for their success upon the coöperation of medical men. 1. It is in the midwives' practice alone that fees are taken; it is the midwives' practice that is pauperising the district, for even the well-to-do have a colourable excuse or, according to Mr. Pritchard, a "right" to employ the midwives; and it is in the midwifery cases that the nurses are taught to do without medical supervision. Now, we are at issue with Mr. Pritchard on this point. He claims "the right of the patient to choose between a midwife and a local medical man." We will admit the right of an individual to risk his life for a sufficient reason, but surely it is no part of the duty of a philanthropic body to encourage the poor and ignorant in running such a risk, least of all to save their pride or their pockets. It cannot be denied that it is safer to have a qualified medical man in attendance upon a parturient woman than a certificated midwife. Yet the Plaistow Maternity Charity has deprived the Poor-law medical officers of the greater part of their pauper midwifery practice and actually appeals to the board of guardians for support on the plea that it effects a saving in the rates. Mr. Pritchard also says that because the 10*s.* fee only covers the cost to the institution of attendance on a maternity case it is a misrepresentation to say that the patient gets any benefit out of the charity. Is it not generally considered a benefit to obtain an article at cost price? Does not the paying patient take one nurse away from her legitimate work among the poor? We have a right to expect more knowledge of economic laws from Mr. Pritchard. It is manifest abuse to buy or to sell, at whatever figure, that which is dedicated by the benevolent to the uses of the poor. Subscriptions to a charity do not entitle a man to use the charity: there is only one ground of claim—poverty. The fee is said to have been "raised from 5*s.* to 10*s.* with a view to meeting certain objections advanced by this medical protection society." This is a good example of the way the house committee deals with professional criticism. We objected to fees being charged in maternity cases, thereupon the committee raised the fee. Naturally we considered this a challenge, not a concession. 2. The district nursing is handicapped by the maternity department, for the latter makes the doctors loath to call in Sister Katherine's nurses and accustoms the nurses to disregard the doctors, in spite of rules and regulations to the contrary. As to the "few trifling cases" which Mr. Pritchard says the nurses have attended without a doctor we will only state here that the evidence in our possession shows that in some at any rate of these cases the supervision of a medical man would have been of advantage to the patients. 3. To criticise the system of training prevalent in this institution is beyond the scope of this letter, but those of your

readers who have not seen its annual report for 1897 will be interested to learn that it is described therein as "a nursing school for all England."

The west-end philanthropist, though far too polite to say so, appears to think the east-end doctor neither a man of education nor a man of honour. He does not ask us for help or advice in conducting a most difficult and essentially professional enterprise; he does not deign to employ logical arguments to meet our objections; and, finally, as instance Mr. Pritchard, he is surprised and a little hurt because we are not content to hold our tongues and squeeze what indirect advantage we can from an institution supported by charity. While we are willing to accept the larger share of blame for this as due to our supineness in the past we insist that concession should not be wholly on our side and hope that in the face of recent difficulties and failures the house committee of the Plaistow Maternity Charity will adopt the two initial reforms we are suggesting—viz.: (*a*) abolition of all fees in maternity cases and (*b*) adequate representation of the local medical profession upon the committee of management.

We are, Sirs, yours faithfully,
R. BUKSH.
FRAS. E. BROMLEY.
J. HEFFERNAN.
P. NAPIER JONES.

Plaistow, E., Sept. 20th, 1898.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 17th you publish a report on the Abuse of Nursing Charities from your Special Commissioner which I cannot allow to pass without a brief comment on some of the facts therein shown. Your Commissioner reports: "Thus a general practitioner related to me that a nurse from the Plaistow Maternity Charity came to him and asked for his assistance in a case of retained placenta. The nurse said that she had been to several other medical men and they had all refused to have anything to do with the case. My informant likewise refused. He argued that medical men should not be thus utilised at the last moment to get a nurse out of a scrape."

No doubt this gentleman would attend a case of chronic drunkenness, where delirium tremens or other complications had supervened, though not called in till the very last moment, but he would not attend a poor woman in imminent danger on the supervention of a complication which could not be foreseen and in what may quite well have been up to that point an ordinary case of labour. Would he have refused to attend the woman if when he had got to the house he had for the first time discovered that a midwife was in attendance? and would it have made a difference to him whether that midwife was trained or untrained? From your Commissioner's report it would appear that he would have assisted the untrained woman's patient but not the trained woman's. And yet the object of the training is, to a great extent, to teach the nurse to know when to send for medical assistance, and, indeed, trained midwives are bound to do so. It is evident that much valuable time was wasted in the case while the nurse, who, after all, could only act as the messenger of the patient, was trying to get qualified attendance for her patient.

May I point out some of the logical consequences of such an abuse of medical position? 1. The nurse will in the future not trouble to call in a qualified practitioner if at all doubtful of his opinions, but if the case be urgent will proceed to operate for herself. The first rebuff, at all events, will appear to her to justify her in thus acting. In a more difficult case she will send for a medical man whom she knows is disposed to help her patients, and this will involve the introduction of fresh medical competition into the district. 2. The nurse will be, to a certain degree, compelled to get more highly trained than she is at present and this will not be too favourable to the pecuniary interests of the trades unionists. 3. Medical men who attend people in such emergencies will be boycotted by their (trades-union) neighbours and they will then be between the coroner's warrant and their neighbours' ill-will. 4. The public will not patronise men whom they know to be bound by rules which disregard everything but the pecuniary necessities of trade. Trades unionists cannot stop from obstructing all measures which interfere with the extension of their trade; logically, they are bound to go on. Unfortunately for the pecuniary interests of the medical profession, its duty is to stop the spread of that very condition which fills its pockets. If once we sanction such proceedings as those I have quoted—forced, perhaps, to do so under penalties—farewell to our honour as medical men.

In view of the fact that the parish medical officer is bound to attend under such circumstances it is hopeless to try to prevent the patients of midwives from receiving qualified medical assistance when their condition requires it, and if what is evidently a local agreement to this effect were to become at all general, general practitioners would soon be left to enjoy their own society at their own cost. There is a right and a wrong way of filling one's pocket. These gentlemen have started on the wrong path. Let us hope that they will stop and that their example may prove a warning to others. I am, Sirs, yours faithfully,

F. R. HUMPHREYS.

Fellows-road, South Hampstead, N.W., Sept. 19th, 1898.

"TUBERCULOSIS AND THE MILK-SUPPLY."

To the Editors of THE LANCET.

SIRS,—One of the statements made in the lecture on Tuberculosis and the Milk-supply, published in THE LANCET of Sept. 17th, is slightly inaccurate. It was based on information given to me just before the lecture, but a more detailed examination of the cases show that one of the cow-sheds had not been examined, and in two cases instead of one the veterinary surgeon failed to see evidences of disease of the udder. Page 736, second column, line 10 from the bottom, instead of "Dr. Rivers informs me," read "Dr. Niven informs me that after receiving the results of my examinations the Sanitary Committee asked Mr. King to visit the cow-sheds from which milk had come which had been found tuberculous. Mr. King found that in fourteen out of the sixteen byres he examined there were cows with diseased udders," &c. I am, Sirs, yours faithfully,

Manchester, Sept. 17th, 1898. SHERIDAN DELÉPINE.

SUNSTROKE OR DELIRIUM TREMENS.

To the Editors of THE LANCET.

SIRS,—That sunstroke should be followed by mental derangement is *a priori* probable, and if there have been any authenticated cases of such a sequence during the heat wave it would be very interesting to have them recorded. Sunstroke has for long been recognised as one of the antecedents of insanity and a large number of cases of the latter malady come under care with a history of the former, but upon strict investigation it is almost constantly found that the symptoms of the "sunstroke," while they do not agree with the classical course of that malady, bear a striking resemblance to those of delirium tremens.

I am, Sirs, yours faithfully,

Catford, S.E., Sept. 16th, 1898. CHAS. MERCIER.

ANILINE COAL-TAR DYES.

To the Editors of THE LANCET.

SIRS,—The interesting and important case of death from effects of poison introduced into the skin by the use of stockings dyed with some poisonous dye referred to in an annotation in THE LANCET of Sept. 10th should draw professional and public attention to the serious results which often occur to persons who wear coloured hose, &c. Some years ago I drew attention—in the International Health Exhibition in London, 1884—to the evil effects of wearing hose dyed with aniline coal-tar dyes, showing the stuffs so dyed which I had collected from cases in which the patients had consulted me about certain eruptions caused thereby, and I went thoroughly into the matter with the assistance of my friend Dr. Hind, then medical officer of health to Manchester, and we found not only the aniline dyes such as rose aniline, rocceline, and azo-benzole red were very injurious to the skin if absorbed, producing violent inflammation and dermatitis, but that the fixing products, such as bichromate of potash, arsenic, &c., also produced the same very irritant effects. The septicæmia caused in the above instance at Hull might have been caused by the dye. I may mention two or three

instances which have quite recently come under my notice 1. A lady, the wife of a medical man, called me to see her She was suffering from great inflammation and an angry wound of the leg followed by acute dermatitis of the whole body, with rise in temperature, after wearing some new stockings from which the dye had become absorbed. 2. Another lady consulted me with almost precisely the same eruptions, having absorbed the dye from a black stocking after an abrasion to the skin. 3. A lady consulted me with a violent eruption all over the shoulders and arms after when heated wearing a red dressing-gown—a portion of which I enclose—no doubt dyed with aniline dye.

The subject is by no means new, but it seems to me a matter of much professional and public interest.

I am, Sirs, yours faithfully,

Harley-street, W., Sept 14th, 1898. JAMES STARTIN.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—Should I in your opinion be doing anything unprofessional in giving the parent of each child vaccinated by me the following pamphlet: "Mr. A. E. Kennedy will pay the parents of any child £10 who may contract smallpox within ten years of being vaccinated by him"?

I know nothing that would so certainly convince people, and especially my anti-vaccination guardians, of the efficacy of vaccination, and I do not think I should lose my £10. But would it give professional offence?

I am, Sirs, yours faithfully,

A. E. KENNEDY,

Plaistow, E., Sept. 20th, 1898. Public Vaccinator.

*** Our correspondent must be careful to word his pamphlet so as to show that he is not claiming any particular skill for himself as a vaccinator but only acting for the good of the cause of vaccination. If this is made clear we do not think anyone will misconstrue his action.—ED. L.

THE IRISH CLUB.

To the Editors of THE LANCET.

SIRS,—May I ask the favour of a place in your columns for this letter? A number of Irishmen, for the most part resident in London, have joined together for the purpose of establishing a non-sectarian and non-political Irish Club, which will provide a central meeting-place in London for Irish residents and also for the many Irish visitors from Ireland, the provinces, and from abroad. With this object a temporary office has been taken at the address given below and a strong and representative provisional committee is being formed. May I therefore request that all Irishmen who are in sympathy with the movement thus briefly outlined will be good enough to communicate with me, when I shall have much pleasure in giving them any further information they may desire on the subject?

I am, Sirs, yours faithfully,

HENRY LENNANE, Hon. Sec. (*pro. tem.*).

11, Red Lion-square, High Holborn, Sept. 20th, 1898.

"UNTOWARD RESULTS AFTER ADMINISTERING RESORCIN."

To the Editors of THE LANCET.

SIRS,—I am not at all astonished at the experience of your correspondent "L. C." Resorcin is an escharotic of considerable power, acting chiefly on epithelium and therefore on mucous membranes. I have on several occasions employed it for destroying the granulations of rodent ulcer and epithelioma in cases where operation was refused or contraindicated. Resorcin is very soluble in water, 1 in 1, and it is not therefore surprising that, if placed in the unpowdered state, undiluted, on the delicate mucous membrane of an infant's mouth, it should produce caustic or vesicant effects. I should be very much astonished if it did not. The drug for internal administration should be diluted with some inert powder or given in some suitable vehicle. No doubt an adult might take it in the powdered state by swallowing it with a draught of some liquid without injury, but that is a very different thing from placing it on an infant's tongue, where it immediately forms a highly-concentrated and active solution. With regard to the discolouration of the specimen referred to this would either not affect its action at all or make it slightly less active. If your correspondent and his colleague had ordered 2 gr. of pure carbolic acid instead of resorcin, and the former had turned a pink colour as it does on exposure to the light, they might just as well attribute the caustic action that would follow to this discolouration as in the case referred to.

I am, Sirs, yours faithfully,

Sept. 20th, 1898. PHARMACOLOGIST.

"THE JOYS OF PLAGUE NURSING."

To the Editors of THE LANCET.

SIRS,—Will you allow me, as a nurse who has spent a good many years abroad, to say that I think it is hardly fair to so severely criticise the rules made for the plague nurses in Calcutta without knowing the special circumstances under which they were made? If I were living in a town in which rioting were taking place I should feel grave anxiety about my nurses if they went out at night unprotected and I should certainly consider myself obliged to ascertain their destination and the sufficiency of their escort; but, even apart from rioting, the whole social atmosphere is so different in India, especially in large towns like Calcutta, that I doubt very much if the liberty rightly accorded to women working at home would be understood there. I believe, for example, that in Calcutta anyone who likes to call upon anyone else is at liberty to do so, and in a country where a household of young women (apart from missionary settlements) is a complete novelty I can quite understand that the authorities may have feared that some most undesirable people might take advantage of the nurses' ignorance of Indian society and some most undesirable visitors be admitted. It was certainly hard upon the lady doctor to place upon her the onus of refusing to admit some visitors and of defending her nurses from such undesirable acquaintances, but as she was requested by the authorities to act as superintendent of the nurses her position probably brought her more into touch with the authorities and with residents in the place who knew the people and could advise her in such matters. To criticise the authorities and to blame them for "insulting the nurses" is to put a weapon into the hands of those who wish to insinuate that such rules were called for by the conduct of the nurses themselves. I cannot think for a moment that anyone wished to insult women who had come out at the call of duty and at considerable risk to themselves. The harm done was by the indiscretion of one or more among themselves or their friends by rushing into print instead of using proper means to have any rules which pressed hardly upon them altered. They were only to be in force for a short time and as soon as the rioting ceased were withdrawn. The correspondence caused great annoyance to many of the nurses who were thus forced into publicity. I may add that I think the greatest care ought to be exercised in the choice of nurses sent abroad to any position and that there ought to be an experienced committee to choose them, not entirely composed of men, and that the nurses' personal as well as professional qualifications ought to be strictly investigated and no one chosen unless the matron under whom she is working can personally recommend her for such a post. Testimonials are of little use. I know of one nurse chosen for plague duty and the matron of the hospital in which she was working was never asked anything about her: if she had been she would certainly not have recommended her for such a post.

I am, Sirs, yours faithfully,

Sept. 21st, 1898. A MATRON.

*** We did not say anything about "insult." The arrangements to which we took exception were those dealing with expenses.—ED. L.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT.—The Secretary of State for the Home Department has made the following further appointments of Medical Referees under the Workmen's Compensation Act, 1897:—England: Circuit No. 6 (further appointment): Mr. Charles Hartley Bedwell Shears, Liverpool. Circuit No. 59 (further appointment): Mr. Thomas William Shepherd, Launceston. Scotland: Sheriffdom of Inverness, Elgin and Nairn: Dr. Murdo Tolme Mackenzie, North Uist.

THE ORGANISATION OF THE MEDICAL PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

THE grievances against the Plaistow Maternity Charity, as already fully described,[1] have led to the formation of a medical union called the East Suburban Medical Protection Society. The remarkable feature of this movement arises from the fact that no sooner had a few medical men gathered together to deal with one particular abuse than they discovered that there were very many other abuses which could only be met by means of united action. In an incredibly short time the multiplicity of other questions which forced themselves upon the attention of the medical men who met together to discuss their grievances in regard to the Plaistow Maternity Charity was so great that the necessity of forming a permanent union became so self-evident as to be irresistible. The main—indeed, the sole—purpose which originally had brought the east suburban medical practitioners together has now become quite a secondary consideration. If all the abuses of the Plaistow Maternity Charity were abolished or the institution itself ceased to exist the medical union which it was instrumental in bringing into being has now its hands so full of other questions that it would have to continue its work as if nothing had happened. Indeed, there are so many and such various questions claiming its attention that it has been found necessary to place the association on a thoroughly legal basis. During the first six months of its existence the East Suburban Medical Protection Society held no less than twenty committee and four general meetings. Of course, as is inevitable in such cases, a good deal of time had to be devoted to the discussing and drawing up of rules, the selection of officers, and the defining of the objects held in view. Then there arose the great question of liability. What was the legal standing of the society and the responsibility of its members with regard to the expenses incurred?

The financial question is indeed a very serious stumbling block. Of course, it may be argued that a society should be self-governed, that the members should not sanction expenditure beyond the means of the society, and that if there is a deficit this is the members' own fault, and therefore they must subscribe to make up the difference. Several objections can be made against this line of argument. The society, for instance, might be involved in some libel or other legal proceedings occasioning an expenditure altogether beyond its normal resources. Then, again, a minority of members might not be willing or might not be able to subscribe the sums voted by a majority of members. No individual member would care to pledge himself to subscribe his share of any unknown sum which a majority might decide to spend. In a word, it was thought absolutely necessary to clearly define and limit the financial liability of the members. This certainly is not the true union spirit. The members, on the contrary, ought to be ready to pay extra levies in cases of emergency. Workmen, skilled and unskilled, submit to this, and it is a difficult matter to find any arguments to show why medical men should not do as much to defend the interests of their profession as workmen do to defend the interests of their craft. However, medical men are but on the threshold of such forms of organisation, whereas the artisans of this country have had experience extending back for more than a century. In any case, and as matters now stand, it was clear that though many practitioners were willing to join a medical union they did not feel that they were in a position to assume vague uncertain financial responsibilities. Therefore, and after taking legal advice, it was found that this objection could be best met by registering the union under the Companies Acts. Thus the union has become a limited society and the financial responsibility of its members does not extend beyond the amount of their shares. The share, of course, is fixed at £1, or rather at 1 guinea, but the annual subscription is only half a guinea. It is only in the event of the society being wound up or under exceptional stress that the members may be compelled to pay the full guinea. Therefore their legal liability is limited to this small sum. Each member on joining must sign the following application form:—

"I [name in full] wish to be elected a member of the East Suburban Medical Protection and Medico-Ethical Society, Limited, and I hereby agree, if elected, to pay the annual subscription (present subscription is 10*s.* 6*d.*) and such other sums as the society may from time to time require of me, provided that such other sums shall never exceed the sum of one guinea in any year, and to abide by and obey the articles, by-laws, and regulations of the society now in force, or which may from time to time be enacted by the society in a legal manner, as provided by the Articles of Association."

For the purposes of registration the society is declared to consist of 500 members. The members are elected by the Executive Council. Three black balls suffice to exclude a candidate, but he may present himself again at a subsequent meeting. The subscriptions are due on Jan. 1st, but members elected in November or December only pay 5*s.* for that year. Members cannot ask for the help of the society unless they have paid up all dues. Those members who make a written request have a right to appear before the Executive Committee and explain their grievance. The annual subscription must be paid within one month, other calls within two months of the time when they fall due, and if the member fails to do this he *ipso facto* ceases to belong to the society, but may be reinstated at the discretion of the Executive Committee on his paying all arrears. Members wishing to leave the society must send in their resignations in writing and pay all they owe. Finally, if the acts or conduct of any member shall, in the opinion of the Executive Council and after due investigation, be considered unworthy the council may censure, suspend, or expel such member. The Executive Council consists of 20 ordinary members, and the President, vice-presidents, two trustees, a treasurer, and a secretary. These officers and the Executive Council are elected at an annual general meeting of the members. The Executive Council may fill up vacancies if they should occur between the annual meetings. It must meet at least once a month and oftener if summoned by its chairman or by 5 members of the Executive Council or 10 members of the society. It is to be noticed that it has already met 20 times in 6 months. There are, besides, rules for the keeping and auditing of accounts and the books may be inspected by all who have an interest in the society. The Executive Council has the power to employ paid agents.

Such, then, are the general rules for the governing and constitution of this new medical union. Dr. F. J. Smith, senior assistant physician to the London Hospital, was elected President and Mr. Murtaugh Houghton of Ilford secretary of the society. The members are for the most part general practitioners residing in East and West Ham, Hackney, Plaistow, Canning Town, Walthamstow, and in the various towns and districts on the line to Epping and on the line to Romford. Indeed, there is no reason why the action of the society should not extend from Aldgate to Southend-on-Sea and ultimately enroll some 3000 members. The registered office of the society is at the West Ham Hospital. Within six miles of this office there are at least 1000 medical practitioners. More than 200 have already contributed to the society's funds, though no active measures were taken to make members. It was first necessary to settle the legal position of the society. Now that this has been done systematic efforts will be made to enrol all the medical men living in east suburban London.

It was in December, 1897, that a Provisional Committee had been formed, and, as already related, a circular concerning the Plaistow Maternity Charity was issued by Mr. Charles Allen and countersigned by 51 local practitioners. That was the beginning of the society, now formally and legally constituted and governed by the rules described above. Hardly, however, had the matter of the Plaistow Maternity Charity been taken in hand than the profession was much disturbed by the proposal to employ moneys collected during the Jubilee year to open a new hospital, dispensary, and nursing institution at East Ham. 600 circulars were dispatched to practitioners likely to be affected by this new hospital, urging that it should not be supported by the profession unless at least 25 per cent. of the Managing Committee were medical men. After some negotiations this condition was accepted; thus the medical men gained their point, though their organisation was as yet only in an embryonic condition. Then there occurred some

[1] THE LANCET, August 27th and Sept. 17th, 1898.

difficulty between Dr. Vallance and the West Ham Guardians. The society came to his assistance, so that, whatever may be the merits of this case, the position of the medical man concerned was strengthened and he was not left alone to wage an unequal war against his employers, the board of guardians. Subsequently several cases arose of medical men who were advertising and others who accepted sixpenny fees. The question of a minimum fee has been more especially discussed among the practitioners of Manor Park. The population of this district is about 10,000, the majority of the inhabitants work at the building trades, and there is so much building to be done in this neighbourhood that the men are supposed to earn from 30*s.* to £2 per week. Sometimes men cannot be obtained and wages of 1*s.* 2*d.* an hour have been paid. Other inhabitants are clerks engaged in the city and many among them are poorer than the workmen. Then there are some retired tradesmen, notably publicans, and they generally own and let three or four houses. Thus the population is not poor and there is not much sickness. What, under these circumstances, should be the minimum fee? When dealing with poor people even a shilling fee with medicine included cannot be obtained if there are some other practitioners in the neighbourhood who accept less. The majority of practitioners at Manor Park charge 1*s.* 6*d.* for consultation at their surgeries and 2*s.* 6d. for visits, but some only charge 1*s.* 6*d.* for visits and one or two practitioners have given medicine and advice for 6*d.* This undercutting is so bad that now even the dispensing chemists are beginning to grumble. Thus recently a druggist having made up a prescription charged 9*d.* The customer, however, indignantly complained and argued that had he gone direct to the medical man he would have obtained both advice and the medicine for 6*d.* At Manor Park many of the local practitioners are newcomers and it is not altogether easy to get them into line nor are they yet quite agreed what the minimum fee should be; and this question has already been discussed several times by the East Suburban Medical Society. Some want to organise a medical agency and out of the multitude of suggestions and proposals made it was finally decided to draw up a list of "objects" and embody them in the Articles of Association. These so-called objects constitute a somewhat attractive programme and should help to increase the number of members. They include the obtaining of adequate representation of medical men on the governing and managing boards of medical charities. This principle we have seen has already been successfully applied at the new East Ham Hospital. Then the society is to wage the battle of the clubs, to seek to suppress medical aid societies and clubs which are not managed in an honourable and professional manner, and to do this successfully it is proposed to establish a public medical service somewhat on the same lines as those adopted at Coventry and Eastbourne. The society likewise desires to engage the services of paid trained nurses to be placed under the sole direction of registered medical practitioners. On the other hand, it will seek to prevent the public engaging the services of nurses who are employed by others than medical practitioners. The society will aid in the prosecution of persons accused of infringing any of the laws which protect the interests of the medical profession. On all such questions and whenever necessity may arise it will endeavour to approach the General Medical Council.

A new and important sphere of action will be organised. This consists of collecting outstanding debts due for medical attendance to members of the society. For this purpose it is proposed that one or more collectors should be appointed so as to save members the trouble of having private collectors of their own. Care will be taken to avoid, as far as possible, doing anything which might offend the patient. Such collectors will also receive weekly subscriptions if the patients prefer that form of payment. For this important service it is suggested that the charge should be only 5 per cent. on the amounts actually collected and this is to include postage and travelling expenses. This 5 per cent. may suffice where comparatively large sums are easily collected, but where weekly subscriptions of 1*d.* or thereabouts are paid 5 per cent. on 1*d.* or so is not sufficient for the trouble of collecting. When the collector cannot obtain the money the society's solicitors will take the matter in hand and they also will only charge a commission of 5 per cent. on the amounts collected. If it be necessary to prosecute and nothing is obtained from the debtor the member of the society will only have to pay the court fees, the solicitor's professional charges being paid by the society. Further, and as an alternative, a member may hand over his doubtful accounts if of not more than two years' standing to the society. The society will proceed at its own risks and will pay all the court and other fees, the member having therefore no risk to incur. On the other hand, should the money be recovered the society will keep one-third of the amount as its commission. This is not an exorbitant charge, for the fees payable to the treasury in County-court cases from the issuing of the summons until all useful remedies have been exhausted come to about 20 per cent. on debts which do not exceed £20. Undoubtedly a service of this description, if well organised and managed, would be of great benefit and would materially help to cement the bond of union between the members of the society.

Another form of coöperation is proposed which consists of the establishment of a medical agency for the sale of practices, negotiating partnerships, engaging assistants, locum tenents, &c., and in such cases a nominal fee would be charged. The proposal to keep and communicate where desired a black list of patients who have failed to pay their medical bills is likewise in the programme. The members will be able to obtain legal aid and advice whenever they are involved in a case which concerns the general interests of the profession. Efforts will be made to assist, by monetary donations or other means, members, their widows and orphans, in sickness, adversity, or old age. For this charitable purpose the society, in its Articles of Association, reserves the right to receive special donations and to invest funds. Finally, the society undertakes to organise professional meetings, concerts, lectures, and other entertainments, thus facilitating social intercourse and adding pleasure to business.

All this undoubtedly constitutes a very full and elaborate programme. Its complete realisation will be a work of time. Rome was not built in a day and there is a painful difference between the inception of a scheme and its realisation. Nevertheless, the society, considering that it is but in its infancy, has worked well so far. It has an energetic secretary, and that is an important consideration, nor does there seem to exist within its ranks any feelings of jealousy or any factious divisions. In other towns and districts such elements of discord have unfortunately done much to mar the success of similar movements. Therefore there is good ground to hope that the East Suburban Medical Protection Society is now fairly launched on a long career of moral and material usefulness to the members of the profession.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague in India.—Improved Prospects of Civil Assistant Surgeons.—Medical Inspection of Passengers by Rail and Boat.—The Second Report of the Bombay Plague Committee.

ON the whole plague has increased during the past week. Over 2300 deaths were reported from the Bombay Presidency and about 20 from the rest of India. It does not seem to die completely away in Karachi and in Calcutta the cases may still be described as sporadic. The general mortality is rising in Bombay and there is reason to fear that more cases occur than are reported.

A recent Government resolution with regard to civil assistant surgeons greatly increases their prospects. A senior grade on a monthly salary of Rs. 300 is sanctioned. Promotion to this grade will be made entirely by selection, the lower grades as before requiring examination. In the Bombay Presidency the assistant surgeons specially selected for the highest posts must have rendered at least 21 years' approved service. There will also be 18 civil surgeoncies to be filled by civil assistant surgeons—in Madras 5, Bombay 2, Bengal 5, North-West Provinces and Oudh 2, Punjaub 2, and Burma 2. It is also proposed subsequently to increase the number to 28. The maximum salary of these posts when in independent charge will be Rs. 500, and when temporary Rs. 350 *per mensem*. Medical inspection for plague of passengers whether by rail or sea, while it detects obvious cases of illness and thus deters the sick from travelling,

cannot ensure against the occurrence of subsequent development.

Two or three cases have arisen on outgoing steamers lately and there must be a considerable number of persons in the incubation stage who successfully pass the railway inspections. At any rate, the system reduces the dangers to a minimum, and the only alternative of quarantine for from seven to ten days is impracticable. At the various camps protecting Calcutta 7911 persons were examined during the past week, of whom 448 were detained as suspects. It is not reported that any case of plague was discovered. As Calcutta itself has shown so few cases these results cannot be put down to medical inspection, but they point rather to the absence of infected persons travelling there. The occurrence of only about 200 cases in Calcutta in three months shows the slightly infectious or contagious nature of the malady and the persistent continuation of plague in the district of Mandvie in Bombay and in Ward 8 in Calcutta emphasises once more that the habitation is the harbour of the poison.

I regret to have to record the death from plague of a lady practitioner, Miss E. Phillips. She graduated at Calcutta, but was at the time house surgeon at the Cama Hospital, Bombay. She was only twenty-three years of age.

The second report of the Bombay Plague Committee just published is of little medical interest. It is elaborately statistical and records the various regulations which were from time to time adopted during the second outbreak in Bombay. During the first three months of the year, when the disease was most prevalent, 5363 persons who had been in immediate contact with plague patients were removed to camp, and out of this number only 131 (or 2·4 per cent.) are recorded as having subsequently developed the disease. With regard to the medical inspection of the passengers and crews of incoming and outgoing vessels it is stated that from July 1st to March 31st 481,250 persons were examined coming into Bombay, of whom 38,223 were subjected to segregation. Out of this enormous number only 27 plague cases were discovered. On outgoing vessels 540,438 persons were examined and 115 plague cases only were detected. The hospital reports are particularly meagre, but they show the utterly worthless returns made from some of the private and caste hospitals. A short bacteriological report indicates how much more might have been done in this direction if some of the English medical men had been posted to this work rather than to the police-like searching for plague-stricken people to which they were allotted. What this volume shows unmistakeably is that the successive measures adopted by the Plague Committee were all carried out too late. The stable door was locked after the horse had been stolen. The measures adopted followed the course of the epidemic instead of anticipating it. Mention of the various regulations which caused dissatisfaction is candidly made, and an explanation of the disturbances which culminated in the riot of March 9th is also given. The whole volume bears witness to the unfortunate policy adopted and to the misfortunes which followed from the beginning to the end of the period with which the report deals.

Sept. 3rd.

THE SOUDAN CAMPAIGN.

(FROM OUR SOUDAN CORRESPONDENT.)

THE BATTLE OF OMDURMAN.

I HAVE just returned from Omdurman with the first convoy of sick and wounded from the battle. As far as we can ascertain the number of killed does not exceed 35, including 3 officers and a war correspondent, Mr. Hubert Howard of the *New York Herald* and the *Times*, and wounded 150.¶

You will have received long ere this graphic accounts of the battle, but I may add (as one who saw the start and the finish) that it was one of the most impressive and wonderful sights of modern days, and that never shall I forget the magnificent charges of the Bagarras right up to the bayonets of our men and the splendid heroism and bravery shown by these rude warriors. The regiment that suffered most was the 21st Lancers, which had 21 killed and about 40 wounded, mostly sabre and spear wounds of a ghastly nature, in most cases severing all the structures down to the bone and causing frightful hæmorrhage from which several died. From my own station on the field I passed back during the first engagement between 50 and 60 wounded, all bullet wounds varying in severity from a penetrating wound of the skull or chest down to a concussion by a spent ball. At this early stage it is almost impossible to give any very definite ideas of the working of the various dressing stations and field hospitals, but on every side and from every mouth nothing but praise is accorded to the admirable working. Not a single man was left on the field a moment after his injuries had been attended to, and I can say without fear of contradiction that not a man was left on the field five minutes after the "cease fire" had sounded.

On our way down to this place we had ample opportunities on the boat for operating, and altogether 20 or 30 successful bullet extractions and minor operations were performed, and at the present moment all the wounded officers and men are comfortably established in this excellent hospital with every comfort which can be provided, and directly the men are fit to be moved they will be sent on. Unfortunately there is a great deal of enteric fever up the river, and at Royan Island, beyond Shabluka, they have had several fatal cases. There still remain several cases to be operated on here, where they will have the benefit of the x rays, for which a separate ward has been entirely set apart, the apparatus being one of the latest construction and perfect in every detail. Those cases in which we were unable to detect the bullets on the way down will be examined here by the rays and operated on. There remain several cases which will require operation, and this can be carried out here under the most favourable conditions.

Hospital on Line of Communication, Abadia, Soudan, Sept. 6th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE committee of the General Hospital have decided to appoint an ophthalmic surgeon and a dental surgeon to the staff of the institution. Advertisements stating the conditions of the appointments have been issued and it is expected that some keen competition will be the result. The character and tone of these offices will take their standard largely from the first appointments. The committee are therefore anxious that the best candidates should be elected irrespectively of any other considerations; they desire that they should be worthy of the traditions of this honourable charity.

The Health of the City.

The return of the medical officer of health shows a decrease in the death-rate for the first week of this month, the total being 20·3 per thousand of the population. There were no deaths from small-pox, measles, or scarlet fever. Two deaths occurred from diphtheria and 48 from diarrhœa during the week. 52 cases of scarlet fever were notified and 22 of typhoid fever. The total number of scarlet fever cases in the hospital was 172, a decrease of 9 as compared with the previous week. Considering the state of the weather and the general water-supply the returns are looked upon as gratifying.

The Conscientious Objector.

The new Vaccination Act has already brought a crop of applicants, the majority of whom while weakly reasoning strongly feel. The interpretation of the complicated provisions exhibited in the Act varies much according to the views held with regard to the right solution of the clauses. The grounds of one objector as shown at the city Police-court on Sept. 17th were novel and hardly convincing to a scientific mind. The applicant stated that vaccination would be prejudicial to the life of his child. He considered that if our Creator thought it necessary for man to be inoculated with the cow-pox He would have done so before we were born. The magistrates granted the application, though, as they stated, unwillingly. Certainly if grounds such as these are held to be sufficiently forcible the intentions of the Act will distinctly fail in securing the greatest good to the greatest number.

The Diagnosis of Drunkenness.

At a local police-court on Sept. 16th a case of alleged drunkenness was defended on the ground that the defendant

was subject to epileptic seizures. The constable who appeared in the case stated that he held a St. John Ambulance certificate and could distinguish a fit from drunkenness. The medical man called proved that he had attended the defendant for the past five years for epilepsy, from which she had suffered since childhood. The disease had become chronic and had affected the patient's mind. Her condition in such seizures might easily lead anyone to believe that she was intoxicated. Upon the evidence adduced the Bench dismissed the case. The problem still remains a difficult one to distinguish drunkenness from some diseases. Any definite signs of a fixed kind would be a welcome addition to our knowledge.

Sept. 20th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Thompson-Yates Laboratories.

THE Council and Senate of University College, Liverpool, have issued invitations for the opening by Lord Lister of the new laboratories of physiology and pathology, presented by the Rev. Mr. Thompson-Yates, on Saturday, Oct. 8th, at 3 P.M.

Distinction for a Liverpool Student.

Lord Lister, the President, and Professor Michael Foster, the secretary, of the Royal Society, have nominated Dr. S. R. Christophers, an *alumnus* of University College, Liverpool, as a member of the commission for the investigation of malaria in the British Colonies. Dr. Christophers is quite a young man, but he has devoted much time to work in the physiological and pathological laboratories of University College, where his career as a student has been a distinguished one. In 1893 he carried off the Torr gold medals for anatomy and physiology, having in the previous year won the junior gold medals in the same subjects. He was elected Holt Tutorial Scholar in 1895-96. Dr. Christophers will proceed to Italy without delay, where he will familiarise himself with the aspects of the disease in that country. Professor Golgi, of the University of Pavia, has kindly offered him all the facilities afforded by the Pavia laboratory for the study of malaria. Thence he will proceed to the Roman Campagna and later to Africa—probably to Blantyre, on the east coast. Dr. Stephens, of Cambridge University, will accompany him to Italy and Africa. His many friends here heartily congratulate Dr. Christophers upon his appointment.

Hospital Sunday in Southport.

Collections were made in the churches and chapels of all denominations in Southport and district on Sunday, Sept. 11th, on behalf of the funds of the Southport Infirmary. The infirmary has lately extended its sphere of usefulness by the addition of special departments for the eye, ear, and throat, consequently the committee appeal for an increase of funds to enable them to carry on the additional work. The weather during the morning was all that could be desired, favouring large congregations; unfortunately, in the evening rain fell for several hours, considerably interfering with attendance at church, and it is feared that the amount expected will not be realised in consequence.

Liverpool Medical Institution.

The first meeting of the session will be held on Friday, Oct. 7th. The President, Dr. W. Macfie Campbell, will deliver the inaugural address on Some Old Authors and their Books, with lantern illustrations. The President will entertain the members of the society, together with visitors who will be present in Liverpool on the occasion of the opening of the new Thompson-Yates Laboratories by Lord Lister, to supper at the rooms of the institution, followed by a smoking concert.

Sept. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Ambulance Associations in Aberdeen.

THE St. Andrews and Aberdeen Ambulance Associations have now been amalgamated. The title of the new body is of formidable length, but its operations will extend to the counties of Aberdeen, Banff, Elgin, and Kincardine.

Typhoid Fever Epidemic in Aberdeen.

A serious outbreak of typhoid fever has occurred in Old Aberdeen district. This has been traced to the milk-supply from two particular dairies which the authorities have ordered to be closed. 20 cases have already been reported.

Sept. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Nursing in the Belfast Workhouse.

THE Local Government Board have written to the Belfast Guardians enclosing a copy of a communication received from the visiting medical officers of the workhouse, in which it appears that on the date of their letter there were only 44 nurses for the infirmary for both day and night for 1500 patients, while the medical officers consider that there should be 82 nurses, of whom 22 would be engaged at night duty in order to abolish pauper nursing. The guardians appointed 15 probationer nurses on Sept. 6th, 11 of whom were to replace 11 temporary probationers, which will only increase the nursing staff to 48, while the medical officers think that 34 more would be required. Mr. Agnew, the inspector of the Local Government Board, reports that the proportion of trained nurses is altogether insufficient and the Local Government Board request the guardians to appoint an increased staff. The medical officers are most modest in only asking for 3 day nurses and 1 night nurse per 100 patients, and yet this demand repeatedly made by them has never been granted, and if pauper nursing is abolished they believe that 4 nurses for every 100 patients by day and 3 by night for every 200 patients will be required. The guardians are to consider the matter in a fortnight.

Sept. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Bone Grafting.

THE end of the holiday season is already evident by the improved attendance at the various societies. At the meeting of the Academy of Medicine held on Sept. 13th M. Berger read a paper for M. Ricard upon Living Bone Grafts. The first case was that of a patient in whom M. Ricard had supplied the loss of a portion of the cranium which had been removed on account of an osteo-sarcoma. The graft was taken from the ilium of a dog. Five years later the patient was taken into the Salpêtrière with sarcomatous growth all over her, except that in the original site of operation there was no recurrence. That the graft had persisted was perceptible to the touch. It is well known that heteroplastic grafts often do disappear and are replaced by a fibrous growth so firm as to give the idea that the graft has persisted. It would have been interesting in this case to have radiographed the graft and also to have taken a portion of it for examinations so as to have had direct evidence of the persistence of the osseous tissue. The second case was that of a young woman suffering from destruction of the bony tissues of the nose. On two occasions attempts have been made to restore the shape of the nose by inserting a metal bridge, but the presence of the metal had always set up ulceration. M. Ricard split the nose in the middle line, separated the skin from the mucous tissues, and introduced between them the fourth metatarsal bone from the patient's own foot. He then united the flaps over the bone. This graft caused no irritation, but the bone mass was eventually replaced by a firm fibrous mass, which, however, enabled the nose to preserve its shape to a certain extent, although, as M. Berger remarked, the nose was too short and thick. He considers that autoplastic grafts have no very special advantages over those taken from animals and is himself disposed to use the latter.

Some Consequences of the Heat Wave.

The excessive heat prevailing in Paris for the last two

weeks has had a markedly injurious effect upon the public health. In addition to the numerous cases of sunstroke gastro-intestinal affections have run up to an unprecedented number owing to the water-supply being temporarily enhanced by water taken from the Seine, the ordinary sources of supply being insufficient to meet the demand. Some cases of gastro-enteritis have been of a very severe type, death occurring in about three days; others have been milder and very few Parisians have escaped an attack of this mild form. Every effort is being made to increase the supply of drinkable water for the town and it is hoped that by next year water from Lunain will be available. Last week an artesian well was bored at the Butte aux Cailles. This well, the boring of which was originally commenced in 1864, gives a minimum supply of 6,000,000 litres per diem at a temperature of 27° C. The water, which is very pure and appears to come from the shell beds of the Jura, will be used in part for a thermal bathing *établissement* and in part, after having been cooled down to 12° C., for drinking purposes.

The Fire at the Central Pharmacy.

A fire broke out on Sept. 14th at the great Central Pharmacy in the portion of the building devoted to the machinery and the storehouses, where are kept the finished products for immediate distribution. It was late when the fire broke out (9.30 P.M.), so that the staff had all gone. The patrol had just been round and observed nothing unusual. The alarm was given by a workman employed in the dispensary whose windows looked out upon the dispensary. The fire brigade, which arrived very quickly, were enabled to report all danger at an end after half an hour's work. The machinery shop is entirely destroyed and the fire is supposed to have originated from a spark from an electric machine having ignited some shavings.

Rabies in Paris.

Owing to the number of cases of rabies recently reported in Paris the Prefecture of Police has taken severe measures with regard to vagrant animals. M. Proust, at a recent meeting of the Board of Hygiene, expressed his approval of these measures, which consist first in the application of the regulations of May 30th, 1892, and secondly in the application of the resolution that the owner of any animal which has bitten a person should be promptly prosecuted. M. Proust has drawn up a table of the cases of rabies reported in 1897 throughout the department of the Seine. There were 351 persons treated at the Pasteur Institute, with 5 deaths—that is to say, 1·4 per cent. In 1896 there were 2 deaths; in 1895, 1; in 1894, 1; in 1893, 4; in 1892, 5; in 1891. 5; in 1890, 1; in 1889, 6; in 1888, 19; in 1887, 9; in 1886, 3; in 1885, 22; in 1884, 3; in 1883, 4; in 1882, 9; and in 1881, 21. In 1897 there were 17,700 dogs seized by the police in the houses of the public, of which number 17,241 were seized in Paris and 529 in the suburbs. Animals known to have bitten people in 1897 in Paris and the suburbs as well number 1826; of these 1594 were dogs, 84 were cats, 146 were horses, and 2 were other animals. 564 were in a state of rabies, 1212 were healthy, and 50 were unknown. 164 adults and 58 children were bitten by animals suffering from rabies, 742 adults and 407 children were bitten by healthy animals, and 34 adults and 9 children were bitten by animals whose condition was not certain. 787 dogs, 212 cats, and 3 other animals were bitten by rabid animals in 1897.

Sept. 20th

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Local Application of Steam in Metrorrhagia.

AT the last Surgical Congress Professor Dührssen of Berlin made a short communication on the Treatment of Menorrhagia by the Local Application of Steam, and he has recently published an article on the subject in the *Berliner Klinische Wochenschrift*. The method was devised by Professor Snegirjeff of Moscow, who applied steam at a considerable temperature in a case of profuse hepatic hæmorrhage after the extirpation of an echinococcus, and he subsequently had recourse to it in uterine hæmorrhages. Professor Dührssen points out that a permanent cure of dangerous metrorrhagia may be effected in this way without an anæsthetic being required, and that the method is applicable in some cases for which severe operations have hitherto been considered necessary. The apparatus employed is quite simple, consisting of a boiler which is heated by a spirit lamp and from which steam is supplied by a caoutchouc tube to a metallic catheter introduced into the uterus, so that the steam from the boiler escapes through the eyes of the catheter into the uterine cavity. When steam has acted for one minute the mucous membrane of the uterus becomes white and hæmorrhages generally stop at once. After four days a second application may be made, but not for more than one minute, as the mucous membrane is liable to be destroyed by the prolonged action of steam. Professor Dührssen's first cases were three patients, one of whom was the subject of hæmophilia and suffered from menorrhagia so profuse that her life was endangered, and extirpation of the uterus had been proposed by her medical attendant. In this case the hæmorrhage was stopped by a local application of steam of two minutes' duration, but after nine days a tubular body was discharged from the uterus which proved to be the entire uterine mucous membrane together with a portion of the subjacent muscle. The patient had a second hæmorrhage thirteen days afterwards, and on the twentieth day steam was applied for the second time, after which no menorrhagia ensued. The exfoliation of the uterine mucous membrane, of course, produced complete adhesion of the uterine walls so that on examination some weeks later no uterine cavity could be found. The same was observed in the two other cases. The method is therefore contraindicated in young persons and of course in hæmorrhages due to malignant growths; but it is specially useful in profuse metrorrhagia at the climacteric period caused by chronic metritis or by interstitial myoma. To avoid adhesion of the uterine walls in young patients Professor Dührssen proposes to apply the steam for a quarter of a minute only and not to repeat it before the next menstruation. This treatment has also been employed successfully in puerperal fever, especially in septic endometritis and in subacute and chronic gonorrhœa of the cervix.

The Death of Professor Nasse.

On Sept. 1st Professor Nasse, the first assistant of Professor von Bergmann, lost his life by an accident. The deceased was an enthusiastic mountain climber and one of the leading members of the Berlin section of the German Alpine Association. Spending his holidays, as he usually did, in the Alps he had made the ascent of Mount Palu, near Pontresina, in company with Dr. Borchard and two guides. When the party were descending and were crossing a glacier a snow-bridge on which Professor Nasse was walking, suddenly gave way. The party being roped together the first guide and Professor Nasse both fell into a crevasse. Dr. Borchard and the second guide also slipped some distance, but at last succeeded in gaining a firm foothold, and both supported their companions by the rope. Unfortunately Professor Nasse had tied the rope round his chest instead of round his pelvis so that his chest was compressed by the tightening of the rope and his breathing soon became difficult. When suffocation was imminent the first guide, hoping to save Professor Nasse by taking the strain off the rope, risked his own life and cut the rope between himself and his unfortunate companion. But this sacrifice was of no avail. The two men standing at the edge of the fissure were now of course able to draw Professor Nasse out of the crevasse, but he was cyanosed and unconscious and after a few feeble respirations he died. The guide, who will become famous for his heroic action and who has justified the old-established renown of the Swiss guides, fortunately escaped death; he was found at the bottom of the crevasse having only sustained some bruises. The news of Professor Nasse's terrible death was received with the utmost sympathy among medical and lay circles in Berlin, where he had a prominent position as head of the out-patient department of the Royal Surgical Clinic. He had made a good many contributions to modern surgery and came especially into notice during the late Græco-Turkish war as leader of the German Red Cross Mission to Constantinople. Professor Nasse resided several months in the Turkish metropolis as chief surgeon to the great military hospital of that city. It was a sad coincidence that on the day of his death the Official Gazette published the news of his being decorated by the Sultan in recognition of the services he had rendered to the Turkish wounded soldiers. Professor Nasse had twice before escaped from imminent death—once on the occasion of a gas explosion on the premises of the surgical clinic, where

his skull was fractured, and once at Constantinople, where he nearly died from a poisoned wound on one of his fingers.

Spirilla in Pleuritic Exudation.

In a case of pleurisy treated in the military hospital of Munich Dr. Welke detected very peculiar micro-organisms which he has described in the *Münchener Medicinische Wochenschrift*. A soldier presented symptoms of pleurisy and pneumonia; he suffered from rigors, high fever, pains in the chest, cough, &c.; on percussion there was dulness in the left side, auscultation showed bronchial respiration with rhonchi, and an exploratory puncture gave evidence of highly fœtid purulent exudation. Before an operation could be performed a large quantity of this fluid was suddenly discharged through the bronchi, the fever decreased, and the patient recovered although very slowly. During convalescence pleurisy of the other side appeared, but passed off in a few days. In the fluid obtained by the puncture Dr. Welke discovered, in addition to leucocytes and streptococci, a great number of filiform micro-organisms which were extremely motile, displacing the leucocytes in the course of their movements. Some of them had a fusiform process at each end and their length was from 100 to 140 μ ($\frac{1}{254}$ to $\frac{1}{178}$ in.). By-and-by their motility became less and stopped altogether in from 25 to 30 minutes, when the pus had become cold. The fluid discharged through the bronchi could not be examined until after the lapse of two hours, by which time the organisms were, of course, dead. It was not found possible to classify the organisms; their great length proved that they did not belong to the bacilli and Professor Hertwig, to whom they were shown, believed them to be either spirilla or protozoa. How they had come into the pleuritic exudation could not be ascertained; probably they had made their way into the pulmonary abscess during the act of inspiration and finding this medium favourable to their development they had increased very rapidly.

Sept. 19th.

Obituary.

GEORGE WILLIS, M.D. GLASG., L.R.C.S. EDIN., L.S.A., J.P.

BY the death of Dr. George Willis, which occurred at his residence, Oak House, on Sept. 15th, the town of Monmouth loses at once its oldest medical man and one of its most prominent inhabitants. The deceased was the eldest son of Mr. George Willis, of Florencecourt, county Fermanagh, and was born in Ireland in 1828. He was the lineal representative of Captain William Willis, first High Sheriff of Fermanagh (1591), and was related to many well-known Ulster families. Dr. Willis received his medical education at Glasgow, having previously served an apprenticeship to Dr. Mahood of Enniskillen, and in 1850 graduated as M.D. at the university there, but his energetic spirit led him (before becoming qualified) to volunteer for the post of house physician to the cholera hospital during the great cholera epidemic of 1848, an act of devotion which was subsequently acknowledged by a handsome testimonial from the committee. In 1850 he also took the diplomas of L.R.C.S. Edin. and L.S.A., and married Miss Frances Spencer and settled down in Monmouth, having bought the practice of the late Mr. Thompson of that town. Dr. Willis's connexion with Monmouth therefore extended to nearly forty-eight years. He was mayor three times—namely, during the two periods 1861–63 and the period 1886–87. In his first year of office the great cotton famine brought about by the civil war in America caused serious distress in the North of England and he gained much credit by his persevering work in connexion with the local organisation for the raising of funds to relieve the Lancashire operatives. The Queen's Jubilee year was celebrated in 1887, on which occasion Dr. Willis's administrative talent was conspicuous, as he took an active part in the arranging of the festivities and popular rejoicings in the town. Working at first in the Monmouth Dispensary he persevered until the dispensary became a hospital as well as a dispensary and during the whole time his services were constantly rendered to the poor of the district. He was also surgeon to William Jones's Charity, Justice of the Peace for both borough and county, and formerly medical officer of health of the Monmouth Rural District. As a medical man Dr. Willis was shrewd and far seeing; as a friend he was staunch and true. Few practitioners contrived so well to see the best side of human nature as did George Willis, and his good humour, his good nature, and his good sense were almost contagious. Fond of the young, entering into their interests with enthusiasm, obtaining from them and their faults many of his humorous episodes, he was by them beloved, trusted, and looked up to. As a Justice of the Peace he rendered a long and useful service both to the town and the county, and as a medical officer of health he allowed few things to escape observation and remedy. Dr. Willis was a widower, his wife having died in 1892. He has left a son, the Rev. W. Armstrong Willis, rector of Llanrothal in Herefordshire. The deceased's brother, Dr. William Willis, spent the greater part of his life in Japan and Siam. An obituary notice of him was published in THE LANCET of Feb. 24th, 1894, p. 507.

RICHARD ELLIS, F.R.C.S. EDIN.

BY the death of Mr. Richard Ellis, of Rye-hill, Newcastle-upon-Tyne, the north of England loses one of her oldest and most esteemed practitioners. Mr. Ellis was in his sixty-seventh year and had been in failing health for some time past, although he was only confined to bed a fortnight before his death. He was born in Dublin and studied medicine at Edinburgh, Dublin, and London, taking his diplomas at Edinburgh. Commencing practice at Whitby he settled at Newcastle in the year 1860. In his early days he was a great and intimate friend of the late Dr. Marshall Hall and, like him, was keenly interested in the physiology of the nervous system. He was instrumental in raising funds for the scholarship established to the memory of Dr. Marshall Hall and a valued possession of his was the microscope used by that distinguished physiologist. Mr. Ellis also worked assiduously at the subject of diseases of the throat and ear, taking great interest in the Throat and Ear Hospital of Newcastle, to which institution he was at the time of his death senior consulting surgeon. He was for many years a contributor to our columns, acting at one time as our Northern Counties correspondent, and was in 1878 the Special Commissioner of THE LANCET appointed to inquire into the sanitary condition of Sunderland. Taking a great interest in all charitable agencies he was from the very first a warm supporter of the Hospital Sunday Fund. He married the youngest daughter of the late Dr. Richard Ripley of Whitby. She died some two months ago and possibly the beginning of his own illness dated from the time of hers. He was the author of "The Ear and Throat," which reached an eleventh edition, and published in our columns a paper on "The Marshall Hall Method of Treatment in Asphyxia, with case of Asphyxia from Submersion successfully treated," which was eventually embodied in Dr. Hall's work on "Drowning." He was a good microscopist and was for many years President of the North of England Microscopical Society.

DAVID EDGAR JONES, M.D. DURH., F.R.C.S. EDIN., L.R.C.P. EDIN., J.P.

DR. DAVID EDGAR JONES died at his residence, 24, Newport-road, Cardiff, on Sept. 12th. Dr. Jones was born near the town of Aberayron, in Cardiganshire, and received his medical education at Glasgow and University College Hospital, London. He took the qualifications of L.R.C.P. and L.R.C.S. Edin. in 1867 and was admitted to the F.R.C.S. Edin. in 1879. He graduated M.D. of Durham University in 1887. Dr. Jones commenced practice in Cardiff about thirty years ago and soon established a large connexion. The deceased took a great interest in municipal matters and in 1875 was elected a member of the town council; in 1885 he was appointed mayor, and in 1888 he was made an alderman. He was also a justice of the peace for the borough of Cardiff. Dr. Jones was for several years chairman of the market committee, and it was mainly through his efforts that the present excellent market buildings and slaughter-houses were erected. He was an ex-president of the Cardiff Medical Society, Government medical inspector for emigrants of Cardiff port, consulting surgeon to the *Hamadryad* hospital ship, and a visitor at the county lunatic asylum. At the meeting

of the Cardiff town council on Sept. 12th a vote of condolence was passed with Mrs. Jones, and the Mayor alluded to the assiduous and conscientious manner in which the deceased had performed his duties. On the same day the magistrates at the Cardiff police-court recorded how deeply they felt the loss of their colleague. The deceased, who was only fifty-three years of age at the time of his death, had suffered for some time from diabetes. He will be greatly missed in Cardiff, where the deepest sympathy is felt for Mrs. Jones.

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the second examination for the degree of Bachelor in Medicine, held at the College of Medicine, Newcastle-upon-Tyne, in September, the following candidates satisfied the examiners:—

Anatomy, Physiology, and Materia Medica.—First-class Honours: Alfred Parkin, College of Medicine, Newcastle-upon-Tyne. *Second-class Honours:* George Mack, College of Medicine, Newcastle-upon-Tyne; Thomas Young Simpson, Cooke's School of Anatomy; and Thomas Seymour Coates, College of Medicine, Newcastle-upon-Tyne. *Pass List:* Curtis Crispin Adeniyi-Jones and Ernest Bertram Appleby, College of Medicine, Newcastle-upon-Tyne; Arthur John Spiller Brandon and Frederick Clarkson, St. Thomas's Hospital; Francis Bernard Henry Caudwell, M.R.C.S., L.R.C.P., Charing-cross Hospital; Herbert William Dudgeon, M.R.C.S., L.R.C.P., Guy's Hospital; William Robert Davidson Daglish, College of Medicine, Newcastle-upon-Tyne; George Ernest Froggatt, Middlesex Hospital; James Herries Graham, College of Medicine, Newcastle-upon-Tyne; Ivon Henry Skipwith Hawes, St. George's Hospital; Robert Simpson Hindmarch and Albert Ernest Hodge, College of Medicine, Newcastle-upon-Tyne; Evan Llewellyn Jenkins, Cooke's School of Anatomy and Westminster Hospital; John Henry Martin, John Wilson Howard Morrison, William Athol Murray, and Alfred Henry Proctor, College of Medicine, Newcastle-upon-Tyne; Michael Joseph Quirke and Thomas Basil Rhodes, Mason College, Birmingham; Henry Reah, Stanley Raw, Frederick Riddle Scott, and William Waters Stainthorpe, College of Medicine, Newcastle-upon-Tyne; Francis Wheler Sime, Guy's Hospital; Godfrey de Bec Turtle, King's College; and Walter Wakefield, Mason College, Birmingham.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. P. Schultz has been recognised as *privat-docent* of Physiology.—*Erlangen:* Dr. Robert Heinz has been recognised as *privat-docent* of Pharmacology and Toxicology.—*Freiburg:* Dr. E. Block, *privat-docent* of Otology, has been promoted to an extraordinary professorship.—*Giessen:* Professor Karl Gaehtgens, Director of the Pharmacological Institute, is about to retire. He was formerly professor in Rostock.—*Heidelberg:* Dr. Karl Baas, *privat-docent* of Ophthalmology, has been promoted to an Extraordinary Professorship.—*Innsbruck:* Dr. Johann Rille of Vienna has been appointed Extraordinary Professor of Dermatology and Syphilis.—*Königsberg:* Dr. Rudolf Cohn, *privat-docent* of Pharmacology, has been granted the title of Professor.—*Prague (Bohemian University):* Dr. A. Vesely has been recognised as *privat-docent* of Internal Medicine.—*Palermo:* Dr. Giuseppe Cirincione of Naples has been recognised as *privat-docent* of Ophthalmology.—*Utrecht:* Dr. Eijkman, Director of the Pathological Institute in Weltevreden, Batavia, has been appointed to the chair of Hygiene.—*Vienna:* Dr. Arthur Schattenfroh has been recognised as *privat-docent* of Hygiene.—*Würzburg:* Dr. Dieudonné has been recognised as *privat-docent* of Hygiene.

LITERARY INTELLIGENCE.—Messrs. Baillière, Tindall and Cox announce the following new works and new editions during the forthcoming publishing season:—A third edition of Sir William Broadbent's "Diseases of the Heart," a third edition of Professor Stewart's "Manual of Physiology," a second edition of Mr. Mayo Robson's "Diseases of the Gall Bladder," a fifth edition of Mr. Lennox Browne's "Diseases of the Throat and Nose," an eighth edition of Dr. Muter's "Manual of Analytical Chemistry," a seventh edition of Mr. Gant's "Guide to the Examination of the Conjoint Board," a fourth edition of the "Handbook for Attendants on the Insane" (under the authority of the Medico-Psychological Association), a second edition of Dr. Hime's "Guide to the Public Health Act," and the following new works just ready: "New French-English Medical Dictionary," by Mr. de Méric; a "Pocket Dictionary of Hygiene," by Mr. C. T. Kingzett, F.I.C., and Mr. D. Homfray, B.Sc.; "Cattle Tuberculosis," by Dr. T. M. Legge, secretary to the Royal Commission on Tuberculosis; Max Einhorn's "Text-book of Diseases of the Stomach"; and a translation of Professor Bollinger's "Pathological Anatomy," with atlas containing 120 coloured plates.—The Rebman Publishing Company (129, Shaftesbury-avenue) announce that from Oct. 1st next they have undertaken the publication of *Public Health*, the journal of the Incorporated Society of Medical Officers of Health.

THE DEATH OF ALICE BAYLY.—In this case Mr. John Lloyd Whitmarsh was accused of the wilful murder of the deceased, who is alleged to have died from the results of treatment designed to procure criminal abortion. The jury on Wednesday last were unable to agree on a verdict and were discharged. The accused, for whom bail was refused, will be re-tried at the next sessions.

PAUPERISM IN THE WEST OF ENGLAND.—Mr. Preston-Thomas, the Local Government Inspector for the West of England, reports that the proportion of paupers to the population in the counties of Cornwall, Devon, and Somerset (with the exception of the three unions of Bath, Bedminster, and Keynsham) is no less than 40 per 1000, being larger than in any other poor-law division. He recommended the adoption of such rules of administration as have been found effective elsewhere.

ST. JOHN AMBULANCE ASSOCIATION.—The members of the King's-cross (Great Northern Railway) Division of the Metropolitan Corps of the St. John Ambulance Association have recently presented to each of their honorary surgeons—Dr. J. Brunton, Mr. G. W. H. French, and Dr. R. Main—a cigar and cigarette case as a token of their appreciation of the lectures given during the spring of 1898. This is the sixth presentation made to Dr. Brunton and, in recognition of his services, he has also been made a life member of the association.

TORQUAY MEDICAL SOCIETY.—The president and members of the council request the pleasure of the attendance of all members of the medical profession at a special meeting of the society to be held at the Museum, Babbacombe-road, on Friday, Oct. 7th, at 4.30 P.M., to hear an address on "Gastric Perforation," by Mr. T. Pickering Pick. The seventh annual dinner of the society will be held after the special meeting, at the Torbay Hotel, at 7.15 P.M., when Mr. R. H. Grimbly will take the chair. Any medical man desiring to dine with the society on this occasion should send a postal order for 7*s* 6*d*. to the hon. treasurer of the dinner committee, Dr. H. V. McKenzie, Elm Bank, Abbey-road, Torquay, not later than Oct. 4th.

AN UNFOUNDED CHARGE.—On Sept. 15th Mr. W. E. Ryves, a medical practitioner of Paradise-square, was charged at the City police-court, Sheffield, with using instruments upon Jane Mulhern with intent to procure abortion. It was not denied that Mrs. Mulhern had miscarried, but she admitted that she had fallen downstairs two days before the miscarriage took place. Mr. McElligott said that he had seen the patient after the miscarriage had taken place and there was nothing to show that it had been brought on in any but a natural way. The chairman said that the case was not sufficiently strong to go for trial and the defendant would therefore be discharged. We congratulate Mr. Ryves on the result, for there is no charge so easy to bring, except, perhaps, that of indecent assault. We think, however, that some punishment should be meted out to those who bring such charges without, as was apparently the case in this trial, one tittle of evidence to support their charges.

THE PLAGUE IN INDIA.—We regret to say that the latest telegrams and the Anglo-Indian papers received by the last mail show that there is a recrudescence of the plague epidemic in India. The anxieties and work of the Government and its medical services will consequently undergo no abatement for the present at any rate. Unhappily, from what we know of the history of this disease, it is not surprising that the epidemic, notwithstanding the repressive measures which have been adopted, has not been eradicated and is now in its third year of existence in India. According to a telegram from Simla of Sept. 20th there were during the previous week 149 deaths in the city of Bombay, against 170 registered during the preceding week. The deaths in the districts, however, have risen to nearly 3000. 4 deaths have been reported from Karachi, 2 from Calcutta, 12 from Madras Presidency, and 8 from Bangalore City. M. Haffkine's prophylactic inoculation method has so far apparently been attended with a larger measure of success than any other. In Calcutta we are glad to say there has hitherto been no serious amount of plague.

BOOKS, ETC., RECEIVED.

BAILLIERE, TINDALL, AND COX, King William-street, Strand, London.
Essentials of Modern Treatment of Disease. By K. M. Nadkarni. Part I. 1898.
A Pocket Dictionary of Hygiene. By C. T. Kingzett, F.I.C., and D. Homfray, B.Sc. 1898. Price 2s. 6d.

BLACKWOOD, W., AND SONS, London and Edinburgh.
The Elements of Physical Education: A Teacher's Manual. By D. Lennox, M.D., and A. Sturrock. 1898. Price 4s.

CASSELL AND COMPANY, London.
Medical Diseases of Infancy and Childhood. By Dawson Williams, M.D. Lond. 1898.

CHURCHILL, J. & A., Great Marlborough-street, London.
Practical Pharmacy. By E. W. Lucas, F.C.S. Illustrated. 1898. Price 12s. 6d.

CLIVE, W. B., Booksellers'-row, Strand, London.
The University Tutorial Series: Text-book of Zoology. By H. G. Wells, B.Sc. Lond., and A. M. Davies, B.Sc. Lond. 1898. Price 6s. 6d.

CONSTABLE, A., AND Co., Westminster.
The Discharge of Electricity through Gases. By J. J. Thomson, D.Sc., F.R.S. With Diagrams. 1898. Price 4s. 6d. net.

CORNISH BROTHERS, New-street, Birmingham.
The Future Water-supply of Birmingham. By Thos. Barclay. Third edition. 1898. Price 3s. 6d. net.

COX, HORACE, Bream's Buildings, London, E.C.
Physical Training at Home. By A. Alexander, F.R.G.S., with an introduction by Lord Charles Beresford. Illustrated. 1898.

DRESSER, W., AND SONS, Darlington.
Zig-Zag Ramblings of a Naturalist. By R. F. Manson. 1898.

HIRSCHWALD, A., Berlin.
Anleitung zur Mikroskopischen Untersuchung des Auges. Von Professor Dr. R. Greeff. 1898.

HODDER AND STOUGHTON, Paternoster-row, London.
The Unconscious Mind. By A. T. Schofield, M.D., M.R.C.S. 1898. Price 7s. 6d.

IMPERIAL PRESS, Surrey-street, London, E.C.
The Imperial Library.—British West Africa. By Major A. F. Mockler-Ferryman, F.R.G.S., F.Z.S. Vol. I., West. 1898.

LEWIS, H. K., Gower-street, London.
Transactions of the Dermatological Society of Great Britain and Ireland. Edited by G. Pernet, M.R.C.S., and W. T. Freeman, F.R.C.S. 1897-98. Vol. IV., with Plates. 1898.

LONGMANS, GREEN, AND Co., Paternoster-row, London.
Clear Speaking and Good Reading. By A. Burrell, M.A., with a Preface by P. A. Barnett, H.M.I. 1898. Price 2s. 6d.

MACMILLAN AND Co., London.
The Cold Bath Treatment of Typhoid Fever. By F. E. Hare, M.D. Illustrated. 1898. Price 6s. net.

REBMAN PUBLISHING COMPANY, Shaftesbury-avenue, Cambridge-circus, London.
Archives of the Roentgen Ray. Edited by W. S. Hedley, M.D., and S. Rowland, M.A. August, 1898. Vol. III., No. 1.

SCIENTIFIC PRESS, Southampton-street, Strand, London.
First Aid to the Injured and Management of the Sick. By E. J. Lawless, M.D., D.P.H. Illustrated. 1898. Price 3s. 6d.

SAMPSON LOW, MARSTON, AND COMPANY, Fetter-lane, Fleet-street, London.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. XIV., Infectious Diseases. 1898.

SHAW AND SONS, Fetter-lane, and BUTTERWORTH AND Co., Fleet-street, London.
Shaw's Manual of the Vaccination Law, containing the Vaccination Acts, 1867, 1871, 1874, and 1898. By a Barrister-at-Law. Sixth edition. 1898. Price 5s.

SMITH, ELDER, AND Co., Waterloo-place, London.
A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M.D., LL.D., F.R.C.P. In 2 Vols. Vols. I. and II. Ninth edition. 1898. Price 28s.
First Aid to the Injured: Six Ambulance Lectures. By Friedrich Esmarch. Translated from the German by H.R.H. Princess Christian. Sixth edition. 1898. Price 2s.

SPRINGER, J., Berlin.
Reise-Berichte ueber Rinderpest u.s.w. Von Robt. Koch. 1898.

VEIT AND Co., Leipzig.
Die Arteriosklerose. Von J. G. Edgren. 1898.

WRIGHT, J., AND Co., Bristol.
Tests and Studies of the Ocular Muscles. By E. E. Maddox, M.D., F.R.C.S. Edin. 1898. Price 10s. 6d. net.

The Taxpayers' Cashbook: third edition: by A. M. Scarff (The Income-tax Adjustment Agency, Poultry, Cheapside, London; prices 2s. 6d. and 3s. 6d. net).—University College, Bristol: Calendar for the Session 1898-99 (J. W. Arrowsmith, Quay-street, Bristol).—Left-hand Writing, a Complete Course of Exercises: by John Jackson, F.E.I.S. (Sampson Low, Marston, and Co., London, E.C.).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BLACK, J. R., M.D. Edin., C.M., has been appointed Surgeon for the Greenock Infirmary, vice J. Paton.

BROWN, J. F., M.D., C.M. Toronto, has been appointed Medical Officer for the Fourth Sanitary District of the Thingoe Union.

CAIRNS, L. M., M.B., C.M. Edin., has been appointed House Surgeon for the Cumberland Infirmary, Carlisle.

COATS, G. W., M.B., Ch.B. Glasg., has been appointed a House Surgeon for the Royal Hospital for Sick Children, Glasgow.

DAMONS, ANNA, M.D. Paris, L.R.C.P. Irel., has been appointed President of the Ancoats Healthy Homes Society, Manchester.

DELANY, K., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Jamestown Dispensary District, vice T. A. Connellan, resigned.

EASTMENT, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Saffron Walden Union.

FELLOWS, F. M., M.B., C.M. Edin., has been appointed a House Surgeon for the Manchester Clinical Hospital, vice W. Dyson.

FULLERTON, E. C. R., M.B., C.M., has been appointed an Assistant at the Dispensary in connexion with the Royal Hospital for Sick Children, Glasgow.

GAMAN, F. R. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Caistor No. 1 Sanitary District and the Workhouse of the Caistor Union, vice Alexander Cameron, resigned, and also appointed Medical Officer of Health by the Caistor Rural District Council.

GRIFFITHS, J. C., B.Sc. Lond., M.B., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Tealby Sanitary District of the Caistor Union.

JAMES, WALTER EVELYN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Adviser to the Monmouthshire and South Wales Employers' Mutual Indemnity Society for the County of Monmouth.

KELLY, M. T., M.D., B.S. Dubl., has been appointed Medical Officer for the Workhouse and the Coddenham Sanitary District of the Bosmere and Claydon Union.

LEITCH, JOHN W., M.A., M.B., Ch.B. Glasg., has been appointed Junior Assistant Medical Officer for the Counties Asylum, Carlisle, vice T. D. Bell, resigned.

MCCULLOCH, EDWARD, M.B., Ch.B. Edin., has been appointed an Assistant House Surgeon for the Royal Albert Hospital, Devonport.

MUIR, D. K., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the South Longbenton Sanitary District of the Tynemouth Union.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Pokesdown District Council.

PROCTER, G. L., M.B., C.M. Edin., has been appointed Medical Officer for the Dawley Sanitary District by the Madeley Board of Guardians.

RENWICK, A. C., M.B., Ch.B. Edin., has been appointed House Surgeon to Noble's Isle of Man Hospital, Douglas.

REYNOLDS, F. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent for the Corporation Hospital by the Bootle Town Council.

SPRAGUE, W. C., M.D. Edin., M.S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Seventh Sanitary District of the Saffron Walden Union.

SUTTON, W. L., has been appointed an Analyst for the Borough of Ipswich, vice J. Napier.

WARREN, ERNEST D., M.R.C.S., L.R.C.P., has been appointed Senior Assistant Medical Officer for the Counties Asylum, Carlisle.

WRENCH, E. B., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Baslow Sanitary District of the Bakewell Union.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Surgeon.

BURY INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Board and residence provided in the Hospital.

CHELSEA, BROMPTON, and BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Surgeon.

CROYDON GENERAL HOSPITAL.—House Surgeon for two years, unmarried. Salary £100, increasing £10 per annum to £120 with board and residence in the hospital.

GENERAL INFIRMARY, Leeds.—Resident Ophthalmic Officer. Salary £50 a year, with board and lodging.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board and lodging. No wines, spirits, beer, &c., provided.

HEREFORD GENERAL INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with furnished rooms, board, washing, gas, coals and attendance.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

JOINT COUNTIES ASYLUM, Carmarthen.—Second Assistant Medical Officer. Salary £130 per annum, advancing £10 annually to £140, with board, residence, and washing. £5 per annum in lieu of stimulants.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £50 a year, with board and lodging.

KILBURN PROVIDENT MEDICAL INSTITUTION, 7, Cavendish-road, Brondesbury.—Vacancy on the Medical Staff.

LIVERPOOL DISPENSARIES, 34, Moorfields, Liverpool.—Assistant Surgeon, unmarried. Salary £80 for the first year and £90 per annum afterwards, with apartments, board, and attendance.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Salary £25 for that period, with board and lodging.

LONDON HOSPITAL, Whitechapel, E.—Assistant Surgeon.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence in the Hospital, board and washing provided, and an honorarium of 5 guineas conditionally.

NORTHAMPTON GENERAL INFIRMARY.—Junior Assistant House Surgeon for six months. Board, lodging, and washing provided and an honorarium of £10 given conditionally.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—House Physician, House Surgeon, each for six months. Salary at the rate of £50 per annum, with board and residence.

PARISH OF WESTRAY, Orkney.—Medical Officer and Public Vaccinator. Salary £90 per annum. Applications to Mr. J. Sinclair, Inspector of Poor, Westray, Orkney.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's-inn-road, London.—House Physician and Casualty House Surgeon for six months. Board, &c., provided. No salary. Also Senior Resident Medical Officer for twelve months. Salary £100 per annum, with board, residence, and washing.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—House Physician for six months. Salary at the rate of £40 per annum, with board, lodging, and washing.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor, Isle of Wight.—Assistant Resident Medical Officer, unmarried. Salary £80 per annum, with board and lodging in the hospital. Applications to the Board of Management, London Office, 34, Craven-street, Charing-cross.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street, and 15, Hanover-square, London.—House Surgeon and Anæsthetist for six months. Salary at the rate of £100 per annum, with partial board and residence.

ROYAL SOUTH HANTS INFIRMARY, Southampton. — House Surgeon. Salary £100 per annum, with rooms, board, and washing.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

SOUTHPORT EYE, EAR, AND THROAT HOSPITAL.—Honorary Surgeon to the Throat Department.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Assistant Resident Medical Officer for six months. Salary at the rate of £40 per annum, with board, lodging, and washing.

ST. THOMAS'S HOSPITAL, London.—Surgeon.

TEIGNMOUTH HOSPITAL, S. Devon.—House Surgeon, to act also as Secretary. Salary £60, with board, lodging, and washing.

UNIVERSITY COLLEGE, Liverpool (Victoria University).—The Chair of Midwifery and Gynæcology.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £50 per annum, with board, residence, &c.

Births, Marriages, and Deaths.

BIRTHS.

DUNCAN.—On Sept. 13th, at Eccleston-street, S.W., the wife of Duncan Duncan, M.R.C.S., of a daughter.

EDWARDS.—On Sept. 18th, at Halling, Rochester, the wife of Arthur Spencer Edwards, M.B., C.M. Edin., of a son.

WHITMORE.—On Sept. 20th, at Bryanston-street, Hyde-park, the wife of W. T. Whitmore, F.R.C.S., of a son.

MARRIAGES.

DEAN—HOPE.—At the Free Church Manse, Banff, on the 16th inst., by the Rev. And. Melville, D.D., Edinburgh, uncle of the bride, George Dean, M.A., M.B., C.M., British Institute of Preventive Medicine, London, to Laura Hope, daughter of the Rev. J. Watson Geddie, B.A., Free Church, Banff.

CHALMERS—CANNINGTON.—On Sept. 21st, at Wesley Chapel, Waterloo, by the Rev. H. J. Pope, D.D., of London, uncle of the bridegroom, assisted by the Rev. T. Hardwick Mawson, of Newcastle-on-Tyne, Albert John Chalmers, M.D., F.R.C.S., younger son of the late Rev. James Chalmers, M.A., to Alice, second daughter of Edwin Cannington, J.P., of Beach Lawn, Waterloo, Lancashire.

GOOD—GORDON.—On Sept. 14th, at St. Paul's, Hammersmith, Hardman Allgood Good, M.R.C.S., L.R.C.P. Lond., second son of the late Rev. Edward Good, R.N., to Frances Louise Innes, youngest daughter of the late James Richard Gordon, Medina-place, N.W.

DEATHS.

ELLIS.—At 100, Rye Hill, Newcastle-on-Tyne, on the 14th inst., Richard Ellis, F.R.C.S. Edin., in his 67th year.

WILLIS.—On the 15th inst., at Oak House, Monmouth, George Willis, M.D., J.P. County of Monmouth, in his 70th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1898, which was completed with the issue of June 25th, and the Title-page to the Volume were given in THE LANCET of July 2nd.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1898, bound in cloth, gilt lettered, price 18*s.*, carriage extra; and Cases for binding the half-year's numbers, cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*, can be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

DEATH FROM ABORTEFACIENTS.

AT an inquest recently held upon the body of a woman who died near Godalming evidence was given that the death was due to the deceased having taken some pills to produce abortion. The box containing the pills bore a Government stamp and a label stating that they were prepared by a physician formerly of the "Women's Hospital, Soho-square." The coroner remarked that something ought to be done in the way of legislation to prevent the wholesale sale of such noxious drugs and the jury added a rider to their verdict to the same effect. We quite concur in this, and, moreover, any paper which publishes any advertisements of pills or other means of removing obstructions should be heavily fined. Something ought also to be done to put a stop to businesses such as that of Madame Frain.

COUNTRY HOUSE DRAINAGE.

To the Editors of THE LANCET.

SIRS,—You would confer a benefit on a number of householders by solving the following sanitary problem. Most of the country houses in this neighbourhood drain into separate cesspools, situated generally 50 yards or so from the house and receiving the waste from water-closets, kitchen sinks, and rain-pipes. These cesspools are usually pits measuring about 6 ft. every way, lined with dry stonework—i.e. large stones set without mortar or cement. They are covered in with tarred timbers on which the grass sod is laid. When not too full and in dry weather, percolation disposes of a good deal of the water received, but all are provided with outfalls discharging into field ditches. The problem is how to deodorise the effluent. My house and an adjoining one drain into a common cesspool through a 6 in. pipe furnished with Buchan trap and ventilating shafts. The closets of both houses are fitted with three-gallon syphon cisterns. The two houses combined contain fourteen persons. Owing to faulty levelling the first part of the ditch which receives outfall contains a good deal of water. This portion measures about 90 yards, and is best described as a black-water ditch, offensive when stirred. During a course of another 200 yards the ditch becomes much cleaner, and is ultimately nearly empty and quite inoffensive. Once a year after the leaves have fallen I have the whole ditch cleaned out. I should be very much obliged for advice as to how the black part of that ditch can be deodorised. What is wanted is a direction as to the quantity of deodorising substance to be added to sewage per head of house inhabitants. The cheaper the substance the more widely it will be used. I may mention that the water-supply of the whole district is derived from the Vartry Waterworks, so that no question of water-pollution arises.

I am, Sirs, yours faithfully,

Sept. 10th, 1898. SOUTH DUBLIN.

*** We deal with the subject of this letter in an annotation.—ED. L.

THE NATURE OF DRY-ROT.

To the Editors of THE LANCET.

SIRS,—I shall feel much obliged if any of your readers, more particularly medical officers of health in Scotland, will inform me if dry-rot in a house is considered a reason for serving a notice on a landlord to effect reparations by the sanitary inspector. I can understand that the landlord may be responsible for putting the floors affected into repair and that if an accident were to occur by putting one's foot into it—i.e., the floor giving way and so causing fracture, &c.—he would be responsible civilly. But I should like to know if it is considered that dry-rot in a house is noxious to health, and if a sanitary inspector is justified in serving a notice on the proprietor to remedy it. If any of your readers can give me some hints as to the prevention and cure of that plague I shall feel very much obliged. And there is another point I should like cleared up. I always believed that dry-rot is a fungus attacking wood *only*. Now I am told by practical men that it also attacks stone. This is, I must say, very hard to believe, and I shall be very much obliged for some references to the literature of the subject. Up to the present time it has cost me a great deal of money and is continually breaking out, and I never know when I shall be called upon to pay from £20 to £50 to get rid of it.

I am, Sirs, yours faithfully,

Sept. 17th, 1898. AFFLICTED.

HYGIENE AT ALGIERS.

A TRAVELLER in search of an ideally hygienic city would scarcely direct his footsteps towards Algiers, and yet the chief civic dignitary in that odoriferous town is clearly imbued with some sound if rather advanced notions regarding cleanliness and the spread of disease. Seeing that articles of food are habitually wrapped up in fragments of paper, such as old journals, obsolete registers, pamphlets, and printed or written matter of various kinds which might before being so employed have passed through the hands of people following diverse occupations who may perhaps have been affected with infectious or contagious diseases and in this way have become contaminated, possibly acquiring the most dangerous properties without even appearing soiled, the practice cannot but be considered prejudicial to the public health and should therefore be rigorously interdicted. Having introduced his subject in a preamble to the foregoing effect the Mayor of Algiers recently issued the following *arrêté* for the information and guidance of the citizens under his control. 1. No painted or stained paper of any description whatsoever shall on any account be employed for the wrappage of alimentary substances. 2. Printed paper, old journals, pamphlets, miscellaneous works, registers and other manuscripts can only be tolerated for the wrappage of dry vegetables, roots, or tubers (dry kidney beans, potatoes, &c.), but in every case the sheet must be free from stain. 3. The police, with the help of the municipal laboratory, will exercise a permanent control in order to satisfy themselves of the cleanliness of the paper used. In a postscript to this remarkable ordinance a list as follows is furnished of moist alimentary substances which must invariably be wrapped up in fresh clean paper, which may be either white or straw-coloured but on no account spotted or stained: butchers' meats, meats of all kinds which are sold retail such as rabbit or poultry, pork, pastry, confectionery, butter, grease, cooked or steeped vegetables, vegetables sold in slices such as pumpkins, fresh or early vegetables, salt or soaked fish, and fresh fish sold retail.

VULGAR METHODS.

WE are informed by a correspondent that he has recently seen a bottle decorated with the following three labels:—

[*Red label in front of bottle.*]

Special advantages are offered to Married Women. Twenty years' sound practical experience, during which period over 4000 Midwifery cases have been attended.

[*White label in front of bottle.*]

H. H——, Physician, Surgeon, Apothecary, &c., L.R.C.P.I., L.M., L.F.P.S.G., and L.S.A. Lond., &c.,
111, Plashet-grove, East Ham.

NOTE.—Dr. H——, for many years of the firm of H—— and J——, Battersea Park, formerly of H.M. Transport Service Egyptian Campaign, and late of H.M. West African Military Service, may be consulted daily, morning before 12; evening 6.30 to 9.

[*Red label on back of bottle.*]

Deafness, Diseases of the Ear and Throat, and the Diseases incidental to Women and Children, receive special attention.

There can be no doubt that to label medicine in such a way is to employ methods which are generally considered beneath the dignity of the medical profession.

THE NEW HARVEY.

WE have received a little pamphlet from M. J. Rodermund, M.D., of Appleton., Wis., which is a reprint of his address delivered before the National Medical Association held at Omaha in June, 1898. Dr. Rodermund is described as "the first physician to discover the law and power that propels the blood." He also sends us an illustration of himself from a photograph. The power which propels the blood is not, as we have all been wrongly taught for the last 250 years or so, the heart. No; it is the same power as that "which furnishes the motive power throughout universal nature." We quote Dr. Rodermund's own words:

"Instead of the blood carrying oxygen through the system it is the oxygen from the air that sends the blood bounding through all the minute capillary blood-vessels, exactly reversing the old theory that has been believed by us all for nearly three centuries. In other words, it is the oxygen we breathe based on the fundamental law of electricity.

"You all know that all positive electric bodies proportionally repel, while all negatives and positives attract each other; hence this oxygen or electricity, both elementary the same, is one of the chief agents and means of life, and is introduced into the system by breathing and nothing else. This air when breathed charges the air-cells of the lungs when the iron in the blood attracts the oxygen; this charges both the air and the blood-cells positively, and thereby generates a powerful self-acting propelling force by each repelling that in the other.

"Is not this problem plain as well as simple? That it is the oxygen from the air we breathe, and not muscular contraction of the heart that gives this tremendous power to push the blood through this fine network of blood-vessels throughout the body. And this force not like dynamic pressure which would strain or even burst the heart, while the other works on a different principle—that of mutual antagonism and not of pressure."

Of course we cannot prove that oxygen is not electricity, but Dr. Rodermund's arguments are not convincing.

WANTED DIAGNOSIS AND TREATMENT.

To the Editors of THE LANCET.

SIRS,—Can any of your readers suggest any cure or palliation of the following miserable condition? Every ten days or a fortnight I am awakened about 4 or 5 A.M. by a headache which gradually gets worse and worse as the morning goes on, until about 1 or 2 P.M., when it becomes unbearable. The pain is generally over first the right, then the left temple, and at the back of the neck and head and upper part of the interscapular regions, chiefly over the seventh cervical and first dorsal vertebræ. At this time, and only when the pain is on the neck, I notice audible cracks on movement, and the feeling is like the pain from a heavy blow at the back of the neck. During the whole time I am unable to eat or drink anything except hot water, which I generally

drink freely, and which, after a time, by making me vomit, seems to relieve me. As the attack robs one of a day's work it becomes a most serious affair. I have tried all the remedies usually recommended in such cases without effect. The only medicine that gives the least relief is an effervescing draught with some bromide and antipyrin and gripping the neck tightly over the carotid arteries. I come of a gouty race and my father was a martyr to headache most of his life. I am in my fiftieth year. Any suggestions will be most gratefully received by

Yours very truly,

Sept. 20th, 1898. L. M.

"THE MEDICAL DIRECTORY."

To the Editors of THE LANCET.

SIRS,—The desire of your correspondent, "Subscriber of Twenty-five Years' Standing," in THE LANCET of Sept. 17th is one we would gladly comply with were it not for the fact that when in the year 1890 we took steps to know the opinion of the profession we found that less than 14 per cent. of the registered practitioners expressed themselves in favour of an amalgamation of the various local lists. Opinions proverbially differ, but it is evident that we consult the wishes of the majority by an adherence to the present plan.

We are, Sirs, yours faithfully,

Great Marlborough-street, Sept. 19th, 1898. J. & A. CHURCHILL.

To the Editors of THE LANCET.

SIRS,—I agree altogether with the remarks of "Subscriber of Twenty-five Years' Standing" in THE LANCET of Sept. 17th as to the inconvenience of placing Wales in a separate section of the Medical Directory. The inconvenience, moreover, is greatly increased by the remarkable fact that Monmouthshire, one of the 40 English counties, is included in the Wales section. Some time back I ventured to call the attention of the editors to this point and I gave them an instance of a young Monmouthshire medical friend who had been put to considerable inconvenience and had been placed under some temporary suspicion in consequence of his name not appearing in the Provincial section of the Directory. It naturally had not occurred to the inquirer to search for his name in the Wales section. I received a courteous reply that the matter would be considered, but still the Directory, in defiance of history, law, and custom, deprives England of one of her counties and makes Wales to consist of thirteen counties. Perhaps the editors may even now reconsider the matter and remove this blemish from their indispensable and otherwise remarkably accurate publication.

I am, Sirs, yours faithfully,

A MONMOUTHSHIRE SUBSCRIBER OF THIRTY

Sept. 17th, 1898. YEARS' STANDING.

"THE LATE ARTHUR JEFFARES BARLOW."

THE following subscription to the fund for the widow of the late Mr. Barlow has been received by Dr. J. Agar Matson:—Dr. W. Brooks, £1 1s. We are requested to state that Dr. J. W. Moore of 40, Fitzwilliam-square, Dublin; Dr. J. Agar Matson of 119, Holloway-road, London; and Dr. J. P. Henry of 2, Lewisham-park, Lewisham, will continue as heretofore to receive donations on behalf of Mrs. Barlow.

SIC VOS NON VOBIS.....

FILIAL piety received a rude check at Clerkenwell police-court on Sept. 19th. An enterprising dairyman had, it appears, recently been fined £10 12s. 6d. for adulterating milk. Accordingly his son, Henry David Welch, and a friend, by name Pettit, started forth with an appeal relating the sad circumstances and expressing a hope that Mr. Welch's friends would rally round him. Unfortunately an unsympathetic constable apprehended the prisoners after they had endeavoured to get a subscription from a dairyman in St. Pancras. Welch junior said he did not think he was doing any harm in collecting money for his father. Mr. Horace Smith, however, took a hard-hearted view and bound over both defendants to keep the peace.

TWO QUERIES.

To the Editors of THE LANCET.

SIRS,—Will you please inform me whether (*a*) when called to a case of cut-throat and having attended it the doctor is bound to communicate with the police or see that the police are informed; (*b*) if a woman comes into a consulting-room and asks the doctor to perform abortion or to administer drugs for that object, what is the precise legal obligation of the doctor? I am, Sirs, yours faithfully,

Sept. 15th, 1898. VERAX.

*** General rules will not hold good in these matters under all conceivable circumstances, but (*a*) it is no business of the medical man to act as an informer, and (*b*) he would be legally correct in sending for the police. In the second case he has been distinctly invited to commit a crime and such invitations are themselves criminal.—ED. L.

Mr. Clarence Beesley.—The office of the society is at 19, Buckingham-street, Adelphi, W.C., and all information will be given by the honorary assistant secretary.

Mr. Ernest Cox.—We do not give medical advice. The case is one, as described to us, where the opinion of a physician at a hospital might fairly be sought.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 22nd, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Sept. 16	30·30	S.E.	...	117	85	59	60	62	Hazy
,, 17	30·03	S.E.	...	121	90	62	63	68	Fine
,, 18	30·00	W.	0·15	86	70	66	64	69	Showery
,, 19	30·23	S.W.	0·04	98	66	47	49	53	Cloudy
,, 20	30·13	S.W.	...	106	75	52	59	61	Cloudy
,, 21	30·05	S.W.	...	106	73	54	53	55	Cloudy
,, 22	30·08	N.W.	...	91	68	55	55	57	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex, (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (1st).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received: *Derby Advertiser, Newcastle Guardian, East Essex Times, Birmingham Mail, Northern Telegraph, East Anglian Daily Times, Cromer Post, Liverpool Daily Post, Wilts Standard, Times of India, Pioneer Mail, Architect, Walsall Observer, Builder, Leeds Mercury, Scotsman, Citizen, Bedford Times, Sussex Daily News, Malvern Gazette, Carnarvon Herald, Birmingham Post, Leicester Post, South Wales Daily News, Yorkshire Post, Bolton Chronicle, Brighton Gazette, Manchester Guardian, Huddersfield Chronicle, Bristol Mercury, Sheffield Telegraph, Western Mercury, Glasgow Evening News, Sanitary Record, Reading Mercury, Local Government Chronicle, Mining Journal, Belfast Evening Telegraph, City Press, Surrey Advertiser, Local Government Journal, South and North Lincolnshire News, Hertfordshire Mercury, Hastings Independent, Framlingham Weekly News, Kelso Mail, Isle of Wight Times, Dunstable Borough Gazette, Fife Herald, Newark Advertiser, Shrewsbury Advertiser, Weekly Free Press and Aberdeen Herald, Manchester Weekly Times, Staffordshire Advertiser, Leek Times, Clifton Chronicle, Teesdale Mercury, Warwick Times, Bridgwater Mercury, Banffshire Journal, Northern Whig, Glasgow Herald, Halifax Evening Courier, Arbroath Herald, Brecknock Beacon, Maidenhead Times, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. F. Ash, Birmingham; Mr. A. E. Abrahams, Lond.; A. G.; Messrs. Allen and Hanburys, Lond.; Mr. J. Alexander, Lond.

B.—Mr. J. E. Broadbent, Haworth; Messrs. A. Bishop and Sons, Lond.; T. B. Browne, Ltd., Lond.; Dr. L. Beale, Weybridge; Mr. C. Birchall, Liverpool; Bury Dispensary Hospital, Secretary of; Messrs. Baillière, Tindall, and Cox, Lond.; Mr. G. A. Brown, Tredegar; Messrs. Bale, Son, and Danielsson, Lond.; Mr. C. Beesley, Exmouth; Mr. Henry Berger, Milan; Mr. R. Bebb, Lond.; Messrs. Brown, Gould, and Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.

C.—Mr. R. H. Cowan, Wigan; Messrs. J. and A. Churchill, Lond.; C. R. G.; Messrs. E. Cook and Co., Lond.; Messrs. Corbyn, Stacey, and Co., Lond.; Mr. W. F. Clay, Edinburgh; Messrs. A. H. Cox and Co., Brighton; Dr. G. Carpenter, Lond.; Dr. W. Carter, Liverpool; Dr. W. Colquhoun, Glasgow; Mr. W. R. Culling, Lond.; Corporate and Medical Reform Association, Lond., Hon. Secretary of; Mr. F. W. Clarke, Manchester.

D.—Dr. H. Dutch, Lond.; Messrs. Dale, Reynolds, and Co., Lond.; Derbyshire Royal Infirmary, Secretary of.

E.—Dr. G. H. Edington, Glasgow.

F.—Miss A. Frith, St. Lunaire, France.

G.—Mr. D. R. Gooding, Southwold; Messrs. Gordon, Alexander, and Co., Lond.; Gt. Yarmouth Hospital, Secretary of.

H.—Mr. T. W. Hannaford, Lond.; Mr. A. T. Hunter, Edinburgh; Humphreys, Ltd., Lond.; Mr. R. Huxley, Lond.; Hove Urban District Council, Town Clerk of.

J.—Mr. J. E. Johnson, Clifton; Miss Ella Jefferiss, Chatham; Mr. E. M. Jenkins, Leeds; Mons. G. Jozeau, Lond.; J. C. P.

K.—Dr. J. M. M. Kerr, Glasgow; Kent and Canterbury Hospital, Secretary of; Dr. T. A. Kellock, Lond.

L.—Mr. H. K. Lewis, Lond.; Dr. P. B. le Franc, Langla, India; London Press Exchange; Leeds General Infirmary, Secretary of; Dr. J. Lowe, Lond.; Mr. H. Lyle, Liverpool; Mr. H. Lennane, Lond.; Mr. H. Littlewood, Leeds; Dr. T. G. Lyon, Lond; Dr. J. H. Lamb, Crediton.

M.—Mr. R. D. Morgan, Ynysybwl; Medical Society of Victoria, Melbourne, Secretary of; Dr. J. S. McKendrick, Glasgow; Maltine Manufacturing Co., Lond.; Dr. Menzies, Dinard; Mr. H. W. Mills, Ruardean; Dr. L. Molloy, Blackpool; Surg.-Capt. D. M. Moir, I.M.S., St. Andrews; Mr. N. H. Maxwell, Leyton.

N.—Dr. H. Nuttall, Sunderland.

O.—Dr. J. Oliver, Lond.; Messrs. Orridge and Co., Lond.; Mr. A. B. Carey Orchard, Derby.

P.—Mr. F. F. Piggott, Cambridge; P. W. S., Lond.; Dr. H. F. A. Peypers, Amsterdam; Plumbers' Co., Lond.

R.—Dr. J. Ryan, Finea; R. M.; Royal South Hants Infirmary, Southampton, Secretary of; Messrs. Reynolds and Branson, Leeds; Messrs. Richardson Bros. and Co., Liverpool; Messrs. Reynell and Son, Lond.; Royal Veterinary College, Lond.

S.—Mr. H. R. Salmon, Lond.; Mr. D. Stewart, Glasgow; Messrs. Sanders, Rehders, and Co., Lond.; Smith's Advertising Agency, Lond.; South Devon and East Cornwall Hospital, Plymouth, Secretary of; Messrs. Street and Co., Lond.; Messrs. Squire and Sons, Lond.; Southport Eye, &c., Hospital, Secretary of; Dr. W. L. Storey, Belfast; Subscriber; Dr. D. Sime, Lond.; Mr. H. W. Scriven, Lond.; Surg.-Capt. R. R. Sleman, Lond.; S. R.

T.—Mr. E. Treves, Brighton; Mr. Tallerman, Lond.; Mrs. Annie Thomas, Yaxley; T. J. C., Lond.; Mr. M. Takayasu, Lond.; Thresh's Disinfector Co., Lond.; Torquay Medical Society, Hon. Secretary of; Dr. E. F. Trevelyan, Leeds; Miss Katherine Twining, Lond.

U.—University of Durham College of Medicine, Newcastle-on-Tyne, Secretary of.

W.—West Ham Hospital, Stratford; West Kent Hospital, Maidstone, Secretary of; Wills, Ltd., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. T. G. Atkins, Cork; Mr. R. R. Anderson, Fern Hill; Messrs. C. Ash and Sons, Lond.; A. B., Newcastle-on-Tyne; A. L.; A. M. St. J. W.; Messrs. Armour and Co., Lond.

B.—Dr. G. A. Bruce, Aberdeen; Miss Baylis, Woking; Mr. M. Benson, Wigan; Mr. B. Bailey, Leeds; Mrs. E. A. Blackmore, Lond.; Mr. W. W. Baxter, Manningtree; B. R.; Messrs. Blake, Sandford, and Blake, Lond.; Dr. B.; B. H.; Mr. R. B. Brown, Settle; B., Lond.

C.—Dr. C. Coles, Borth; Mr. J. M. Carvell, Catford; Mr. J. Carter, Lond.; Croydon Rural District Council, Lond.; C. W. F.; C. E. A.

D.—Mr. A. K. Dresser, Padstow; Mr. A. N. Davies, Ivybridge; Dover Hospital, Hon. Secretary of; Mr. H. L. Davies, Gargrave.

E.—Mr. W. Evans, New Quay; E., Woking; E. B. J.; Mr. W. B. Ellis, Newcastle-on-Tyne; Mr. W. B. Edwards, Cymmer.

F.—Mr. T. B. Fawley, Lond.; F. B.; Mr. Foxton, Selby; Dr. A. Foxwell, Birmingham; F. W.; Forceps, Wrexham; Messrs. Fletcher, Fletcher, and Co., Lond.; Dr. F.; F. F. M.; F. A.; Fibula, South Normanton; Dr. J. Fleming, Stockton-on-Tees.

G.—Dr. H. E. Gamlen, Hartlepool; Dr. C. G. Gibson, Launceston; G. S. T.; G. S. J.; G. P. E.; Mr. J. A. Graydon; Mr. J. B. Gabe, Morriston; Mr. G. Griffith, Milford Haven; Mr. S. W. Geddie, Banff.

H.—Mr. S. Hogg, Belfast; H. G.; H. T. W.; H. J. R.; H. E. M.; Dr. H. Harland, Ryde; Mr. J. R. Hatfield, Worthen; Mr. J. Heywood, Manchester; Mr. R. Hedden, Bideford.

J.—Mr. P. Jones, Pontnewynydd; J. J. H.; J. D.; J. H.; J. W. D.; J. K.; J. W. R.; J. D. R.; J. C. P.; J. J. K.; J. T. T.

K.—Kilburn Provident Medical Institute, Secretary of.

L.—Dr. W. M. Leslie, Lond.; Liverpool Infirmary for Children, Hon. Secretary of; Mrs. H. Le Franc, St. Leonards; L. M., Woodford Green; Mr. W. W. Leigh, Treharris.

M.—Mr. H. Maclean, Ashbourne; Mr. E. Marsh, Oldbury; Mr. J. McClelland, Egremont; Messrs. Macmillan and Co., Lond.; Dr. H. C. Marr, Lenzie; M. and S.; Dr. P. A. McCarthy, Killeagh, Ireland; Medicus, Manchester; Dr. M.

P.—Mr. J. W. Pratt, Wiveliscombe; Poplar Hospital, Secretary of; Mr. G. W. Prees, Swansea; Preston Royal Infirmary, Secretary of.

R.—Dr. W. J. Ruddock, Newcastle-on-Tyne; Dr. Reinhardt, Reading; Dr. N. Raw, Liverpool; Rara Avis, Condover; R. C. T.; Mr. R. Redpath, Newcastle-on-Tyne; R. G. C. T.; Mr. A. L. Rozelaar, Lond.

S.—Mr. R. A. Shannon, Orpington; Dr. A. W. Scott, Woodhouse; Mr. J. F. Sheppard, Sandy; Mr. R. Smeeth, Clongowes Wood; Mr. A. J. Sheffield, Lond.; Dr. G. Stanton, Simcoe, Canada; Messrs. Shaw and Co., Manchester; Mr. C. Stonham, Lond.; Stockton and Thornaby Hospital, Secretary of; Mrs. Skinner, Winchelsea; Mr. J. W. Smith, Tunbridge Wells; Strophanthus, Lond.

T.—Dr. J. J. Tate, Bideford; D. J. Thomas, Nantymoel; Teignmouth Hospital, Secretary of; Mr. J. B. Thomas, Llangadock; Messrs. J. Turner and Co.; Queen's Ferry.

U.—Dr. J. Utting, Liverpool.

V.—Rev. H. R. Verry, Easton; Vinolia Co., Lond.

W.—Mr. P. Wilson, Lond.; Mr. D. O. Williams, Glandovey; Mr. J. Wilson, Convoy; W. R. S.; Mr. J. W. Walker, Wakefield; W. B. L.; Williamson, Witton Park; Hon. Lady Welby, Denton Manor; Dr. Forbes Winslow, Lond.; Rev. W. A. Willis, Monmouth; W. D.

EVERY FRIDAY.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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